CHAPTER 10: PLOT CONTROL

10.0 PLOT CONTROL

The options on the PLOT CONTROL pull-down menu control various aspects of plotting tracks on the tactical display.

SUMMARY OF COMMON OPERATIONS—PLOT CONTROL

Window buttons and pop-up menu options common to most JMCIS operations are described in this section and will not be discussed in detail in the following sections. The buttons and options listed below are routinely found on Plot Control option windows. Those that are "exceptions to the rule" will be described within their respective sections.

Note: See Appendix A, *Common Operations,* for a more detailed description of these buttons and options.

APPLY—performs the selected operation. For example, if the action is to compute certain values, clicking APPLY carries out the operation.

ARCHIVE—saves individual records from a database (archived) to another location (e.g., tape) for storage.

CANCEL—discards changes made to a record and returns to the previous function.

DELETE—removes (deletes) the selected record(s) from the database.

EXIT—exits (leaves) the option in use.

HELP—provides a general description of the option, function, or window.

OK—accepts changes made to a record and returns to the previous function.

PRINT—generates a printed report of the selected record or file.

RESTORE—retrieves stored records to their original database.

SELECT ALL—selects all the items in a list.

UNSELECT ALL—deselects all the items in a list.

10.1 SYMBOL LABELS

Use the SYMBOL LABELS option to set the appearance of the labels—type, size, and number of characters—plotted with tracks.

To access this window: PLOT CONTROL menu **:** SYMBOLS LABELS option **:** SYMBOL LABELS window (Figure10.1-1).

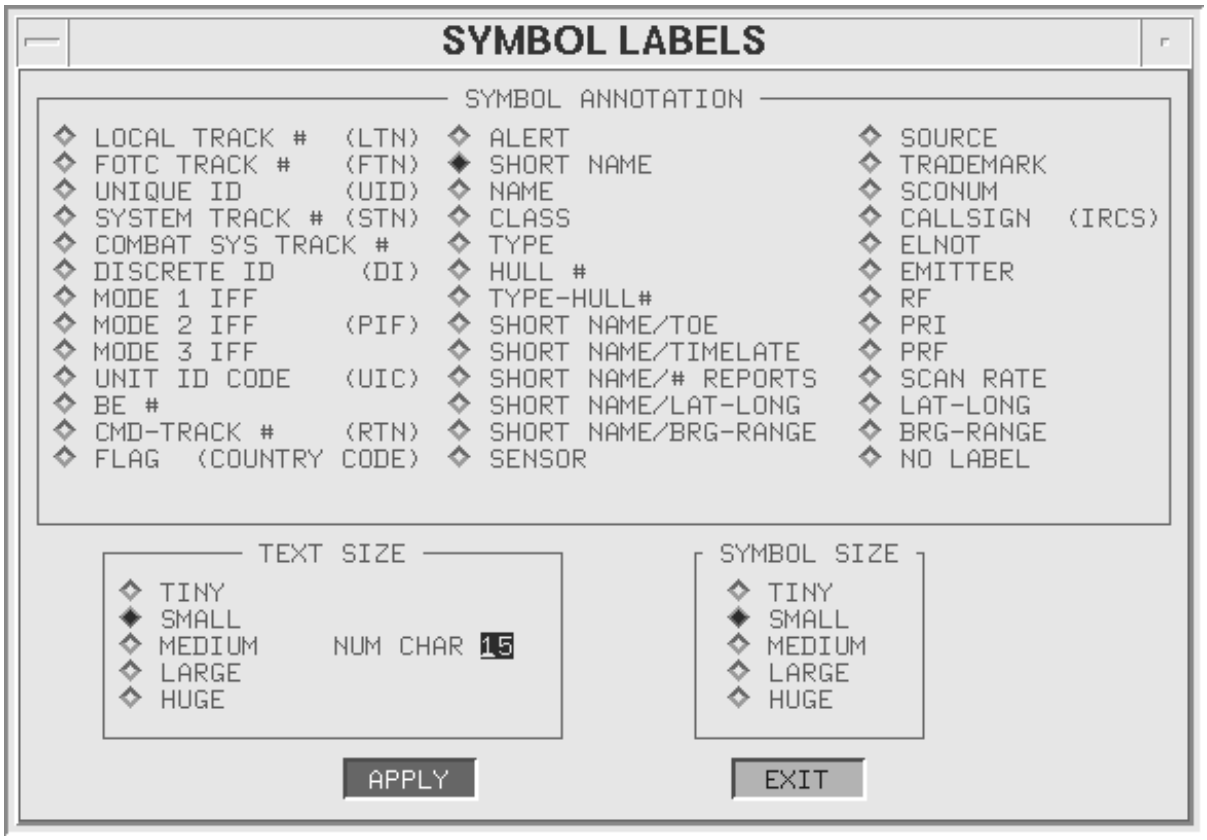

Figure10.1-1 Symbol Label Window

How to use the SYMBOL LABELS Window:

1. Click the appropriate diamond knob to select the SYMBOL ANNOTATION, TEXT SIZE, and SYMBOL SIZE.
2. Enter the number of characters in the TEXT SIZE box.
3. Click APPLY to accept new settings, or click EXIT to discard changes made since the last APPLY.

4. When the labels are set, click EXIT to leave this option.

Note: Settings for symbol annotation and the number of symbol label characters can be overridden by the TRACKCONTROL option on an individual track's pop-up menu.

10.1.1 SYMBOL ANNOTATION BOX

Click an appropriate diamond knob in the SYMBOL ANNOTATION box to specify the symbol annotation and the following actions occur:

- Labels for all tracks show the chosen symbol annotation.
- If there is no value in the track database for the chosen symbol annotation, the track label defaults to the local track number (LTN).

Default: Symbol Annotation is SHORT NAME.

Note: If the display appears truncated, check the setting for the number of characters to be displayed. Many combination labels (e.g., SHORTNAME/Lat-Long) require settings of 25-35 characters for all of the information to be shown.

Symbol annotation diamond knobs mean the following:

LOCAL TRACK # (LTN)
Local track number assigned by the system. This number begins with a specific alpha-character for the following track types:

T—Platform tracks

A—Ambiguities

C—COMINT tracks

L—Link tracks

E—ELINT tracks

U—Unit tracks

B—Acoustic/Sub tracks

F—FCS tracks

R—Raycas V

S—SPA-25G

FOTC TRACK # (FTN)
Force Over-The-Horizon Track Coordinator track number. Assigned by the system on the FOTC ship when in FOTC Controller mode.

UNIQUE ID (UID)

Unique identification number; used for ashore sites only. Begins with three letters that represents the site reporting the track, followed by a series of numbers to identify the track.

SYSTEM TRACK # (STN)

System track number, also known as the Naval Tactical Display System (NTDS) track number.

This 4-digit track number is exchanged with other ships and aircraft via Link-11 and other tactical data networks.

COMBAT SYSTEM TRACK #

System Track Number, based on the Naval Tactical Data System or Advanced Combat Direction System local track number.

DISCRETE ID (DI)

Discrete Identifier (DI) number; four-digit octal code that represents hostile or unknown tracks. Usually assigned on a quarterly basis in each theater of operations.

MODE 1

A two digit code that is used to indicate the task/mission assigned to any vessel or aircraft. Friendly military only.

PIF/MODE 2

Personal Identification Feature (PIF) number or Mode 2 number; a four digit code that provides an exact ID for any vessel or aircraft. Friendly military only.

MODE 3

A four digit code that is used to indicate the task/mission of both military and commercial vessels and aircraft. May be used for pseudo PIF codes during special operations.

Also indicates emergency conditions within the aircraft: communications emergency, distress (hijack), mechanical emergency due to catastrophe.

UNIT ID CODE (UIC)

Unit ID code number—for ashore sites only.

BE #

Basic Encyclopedia number, used for land emitters.

CMD-TRACK # (RTN)

Number enters the system from an incoming report and shows the originator's local track number (the received track number), along with the originator of the report as shown in the MSGID line of the message.

FLAG (COUNTRY CODE)
Two-letter code identifying the country associated with the track.

ALERT
Alert code for the track. Alert codes mean the following:

Alert Code	Meaning
HIT	High Interest Track
TGT	Target
SUS	Suspect Carrier
NSP	Cleared Suspect
. . .	No Alert

SHORT NAME
For most tracks, shows a default value of the first ten characters of the track name; for Link tracks, shows the NTDS track number; for COMINT tracks, shows a combination of PDDG and Raid Number data elements.

NAME
Name shown in the track's UNIT NAME field.

CLASS
Ship class or aircraft model/class designator.

TYPE
Code for ship type (for example, CGN).

HULL #
A 1–6 character alphanumeric entry assigned to the ship and shown on the ship's hull (e.g., A35, D51).

TYPE -HULL #
Ship type and hull number combined; helps track and plot ships of the same type.

SHORTNAME/TOE
Short \name for the track, combined with the latest report's time of event (TOE). TOE is also referred to as the DTG (date-time-group).

SHORTNAME/TIMELATE
Shortname for the track, combined with the amount of time elapsed (hours and minutes) since the last report.

SHORTNAME/# REPORTS

Shortname for the track, combined with the number of reports received for the track.

SHORTNAME/LAT-LONG

Shortname for the track, combined with the latitude and longitude of the track's last reported position.

SHORTNAME/BRG-RANGE

Shortname for the track, combined with bearing and range to the Master Reference track (in nautical miles).

SENSOR

Sensor type used to detect the track at its last reported position.

SOURCE

Two-letter OTCIXS station source code (for example, AM=America). Letters are taken from the Source XREF Table, which can be viewed from the SOURCE XREF TABLE option (MISC menu).

Can also be used to show a 6-character, alphanumeric entry for the reporting source or system. (Examples: CASREP, MOVREP, Wizard.)

TRADEMARK

Unique identification assigned to a track to enhance the track evaluation. Normally used for submarines, this is the case or designation number identifying unknown or hostile submarines.

SCONUM

Naval vessel identification number (alphanumeric code) assigned by the Office of Naval Intelligence.

SCONUM (Ship's Control Number) is sometimes referred to by its old name—NOIC ID. SCONUMs are typically of the form A#####.

CALLSIGN (IRCS)

International radio call sign assigned to the ship is an 8-character alphanumeric code.

ELNOT

An acronym for ELINT Notation, the electronic emitter code assigned to a radar by the detecting sensor.

This 5-character alphanumeric code usually begins and ends with a letter. Some examples include:

A###Y = Airborne (communist-bloc)

B###Y = Land-based (communist-bloc)

C###Y = Shipborne (communist-bloc)

F###Y = Coastal Defense (communist-bloc)

L0000 = Unknown emitter type

T#### = Special interest emitter

N###Y = US military emitter

M###Y = Commercial shipping emitter

EMITTER
Radar name (for example, RAY1500, SPN-43, HEADNET).

RF
Radio frequency, measured in megahertz (MHZ).

PRI
Pulse repetition interval (PRI), measured in microseconds.

PRF
Pulse repetition frequency (PRF), measured in pulses per second.

SCAN RATE
Scan rate, measured in seconds per rotation (SPR), or in cycles per second (HZ).

LAT-LONG
Most recently reported position (latitude/longitude).

BRG-RANGE
Bearing and range of the track from the Master Reference Track, in nautical miles.

NO LABEL
Indicates that the symbol is to appear without a label.

MODE 3 IFF
Indicates missions of both military and commercial aircraft.

Also indicates emergency conditions within the aircraft: communications emergency, distress (hijack), mechanical emergency due to catastrophe.

10.1.2 TEXT SIZE

To specify the text size for symbol labels:

1. Click the diamond knob to specify the text size (tiny, small, medium, large, or huge).
2. Text size entered here also affects PIM track and formation labels.

3. Enter the number of characters to be shown for the labels in the NUM CHAR field—15 characters or less.

Defaults: Text size = SMALL; number of characters = 10.

Note: If the display appears truncated, check the setting for the number of characters to be displayed.

10.1.3 SYMBOL SIZE

Click the appropriate diamond knob to specify the track symbol size (tiny, small, medium, large, or huge).

Default: Symbol size = SMALL.

10.2 SPECIAL CONTROLS

The SPECIAL CONTROLS option controls the appearance of three separate track-related items on the tactical display:

- Controls whether special tracks will be labeled differently from other tracks when plotted.
- Controls the appearance of dead reckoned tracks.
- Controls whether different types of tracks (Platform, Link, ELINT, etc.) will show a small letter to designate track type (P, L, E, etc.).

To access this window: PLOT CONTROL menu **:** SPECIAL CONTROLS option **:** SPECIAL PLOT CONTROLS window (Figure 10.2-1).

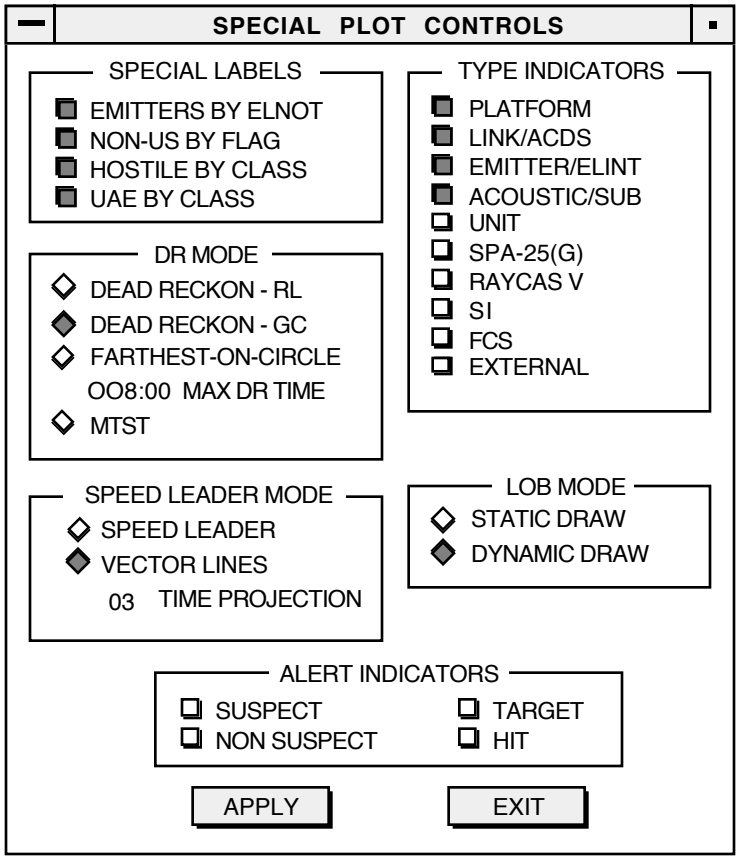

Figure 10.2-1 Special Plot Controls Window

How to use the SPECIAL PLOT CONTROLS Window:

1. Click the appropriate diamond knobs and checkboxes to toggle controls OFF or ON.
2. Click APPLY to accept new settings, or click EXIT to discard any changes made since the last APPLY.
3. When the diamond knobs and checkboxes are set (after clicking APPLY), click EXIT to leave the option.

The SPECIAL PLOT CONTROLS window contains six boxes—SPECIAL LABELS, DR MODE, SPEED LEADER MODE, TYPE INDICATORS, LOB MODE, and ALERT INDICATORS—each controlling the look of separate track-related items on the tactical display. These boxes are described in the following subsections.

10.2.1 SPECIAL LABELS BOX

The SPECIAL LABELS box contains checkboxes that control whether or not special labels appear for certain track types.

EMITTERS BY ELNOT

Show the 5-character ELINT ELNOT notation (ELNOT field value) as the label for Emitter/ELINT tracks.

If this checkbox is blank, Emitter/ELINT tracks plot with the same labels as other tracks in the system.

NON-US BY FLAG

Shows the FLAG code as the label for non-US tracks.

Example: Click NON-US BY FLAG, and a track from France displays an FR label.

If this checkbox is blank, non-US tracks plot with the same labels as other tracks in the system.

HOSTILE BY CLASS

Shows the CLASS code as the label for hostile tracks.

If this checkbox is blank, hostile tracks plot with the same labels as other tracks in the system.

If this checkbox and the NON-US BY FLAG checkbox are clicked, any track that falls into both categories is shown by CLASS. This checkbox overrides the NON-US BY FLAG checkbox.

UAE BY CLASS

Shows the CLASS code as the label for unidentified assumed enemy (UAE) tracks.

If this checkbox is blank, UAE tracks plot with the same labels as other tracks in the system.

If this checkbox and the NON-US BY FLAG checkbox are clicked, any track that falls into both categories is shown by CLASS. This checkbox overrides the NON-US BY FLAG checkbox.

10.2.2 DR (DEAD RECKON) MODE BOX

The DR MODE box controls how dead reckoned tracks appear on the tactical display. To be effective, the dead reckoning mode must be turned on with the ATTRIBUTE TOGGLES option from the PLOT CONTROL menu.

DEAD RECKON - RL

Plot the dead reckoned track at the position where it should be at the current time using Rhumbline calculations. This position is based on position, course, and speed from its last calculated report to the present time.

Rhumblines are typically used for short range projections of military tracks.

DEAD RECKON - GC

Plot the dead reckoned track at the position where it should be at the current time, using Great Circle calculations. This position is based on position, course, and speed from its last calculated report to the present time.

Great Circle projections are typically used for long range/time predictions of merchant ships or commercial aircraft.

FARTHEST-ON-CIRCLE

Plot a farthest-on-circle around the track's last reported position. Default speeds are used, according to the track type being displayed. (Example: ships = 50 KTS; subs = 50 KTS; aircraft = 750 KTS.)

MAX DR TIME

If DEAD RECKON-RL, DEAD RECKON-GC, or FARTHEST-ON-CIRCLE is selected, the tracks will only be dead reckoned for XXX hours, where XXX is the time entered in this field. The default time is 8 hours and format is HH:MM. Note: The MTST track projection mode is not affected by MAX DR TIME.

MTST (Maneuvering Target Statistical Tracker)

Plot all tracks at their MTST-calculated (predicted) positions. The MTST position is a modified plot of the probable course of the track.

MTST is based on a mathematical formula and has greater probability of being accurate than a dead-reckoned track based on the reported course/speed for the track.

MTST should be used for predicting ship movements (i.e., it is not useful for aircraft or land tracks).

10.2.3 SPEED LEADER MODE BOX

Use the diamond knobs to toggle between SPEED LEADER and VECTOR LINES modes. Use the TIME PROJECTION field to set the time range for Vector Lines.

Vector Lines mode calculates the track's current position and speed, along with the time entered in the TIME PROJECTION window. The length of vector lines plotted on the tactical display equates to where the track will be at a specified time entered as a value in the TIME PROJECTION field.

SPEED LEADER

Plots Speed Leader lines (a solid line) based on speed, for those tracks with the speed leader toggle turned on.

VECTOR LINES

Plots those tracks (with speed leaders turned on) as Vector Lines. Takes into account the actual track speed to indicate direction. Vector Lines are drawn as thicker (line width of 3) dashed lines.

TIME PROJECTION

Projects the length of the Vector Lines. Calculations are based on a time value entered in this field, plus the track's speed. These calculations show how far the track will advance from the current time to the designated time. (Valid time range is 1 to 30 minutes, format equals NM, default time is 3 minutes.)

10.2.4 TYPE INDICATORS BOX

The TYPE INDICATORS box contains checkboxes that control whether different types of tracks (such as Platform, Link, ELINT, etc.) will display a small letter to the lower right of the track symbol.

Each checkbox represents a different type of track. Click the appropriate track type checkbox, as listed in the following:

P = Platform

L = Link/ACDS

E = Emitter/ELINT

A = Acoustic/Sub

U = Unit

S = Spa-25(G)

R = Raycas V

C = SI

F = FCS

X = External

10.2.5 LOB MODE BOX

Use the LOB (Line of Bearing) MODE box to show the track's projected path in one of two modes—Dynamic or Static.

DYNAMIC
Plot the LOB to the edge of the chart. The symbol and label are shown at the end of the line. For example, if the selected map is the world view, DYNAMIC draws the LOB lines to the edge of the display. Note: If the lines project toward the right edge of the chart, the label is drawn at the lower-left of the tactical display.

STATIC
Plot the LOB up to 300NM from the track's current position. Symbols and labels are shown at LOB end.

10.2.6 ALERT INDICATORS BOX

The ALERT INDICATORS box contains checkboxes that control whether tracks with different types of alerts will show a small letter to the lower left of the track symbol.

The following alert letters are plotted next to track symbols for those alerts toggled on:

S = Suspect

N = Non Suspect

T = Target

H = Hit

10.3 SLASH TIMES

A track can be plotted with a slash through its symbol to indicate that it has not been updated within a certain time interval. The SLASH TIMES option is used to designate that time period and to control track dead reckoning limits.

The SLASH TIMES option contains two cascading menu options:

- CAT/THREAT
- MISC. LINK11

10.3.1 VIEW AND SET SLASH TIMES—CAT/THREAT

To access this window: PLOT CONTROL menu **:** SLASH TIMES option **:** SLASH TIMES window (Figure10.3-1).

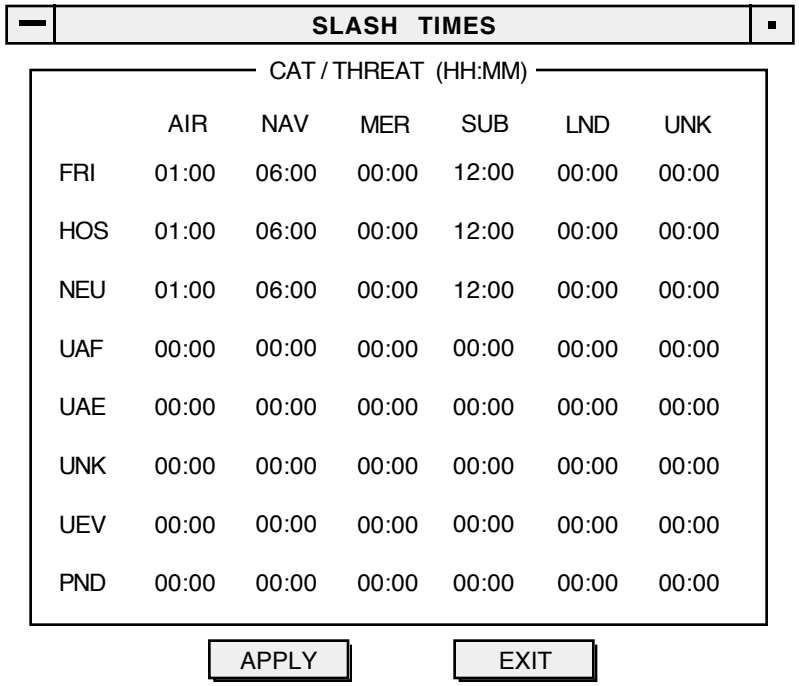

Figure 10.3-1 Slash Times Window

The SLASH TIMES window contains 48 fields, each corresponding to different track symbology.

Specifically, the 48 fields represent combinations of track types and track threats (Air, Navy, Merchant, Fishing, Submarine, Land, or Unknown Evaluated to be Friendly, Hostile, Neutral, Unknown Assumed Friendly, Unknown Assumed Enemy, Unknown, Unknown Unevaluated, or Pending).

How to use the SLASH TIMES Window for Cat/Threat:

1. Enter the time that must elapse (since the most recent report) before a slash appears through the track symbol.
   a. Enter time values in hours and minutes (HH:MM).
   b. Maximum value is 99 hours 59 minutes.
   c. A value of 00:00 means that a slash is not to be plotted.
2. Use one of the following methods to set slash times:
   - SET ALL option, available from the pop-up menu, can be used to set all the fields to the same time.
   - Set one column at a time by clicking the CAT heading (AIR, NAV, etc.). The CAT/THREAT window opens to enter the time value.

- Set one row at a time by clicking the THREAT heading (FRI, HOS, NEU, etc.).
- Set each field individually.

3. Click APPLY to accept new settings, or click EXIT to discard changes made since the last APPLY.

Figure10.3-2 illustrates how a friendly track is plotted with and without a slash.

Figure 10.3-2 Friendly Track Without Slash, With Slash

The direction of the slash changes as time elapses since the most recent report. Figure10.3.1-3 shows the different slashes that appear for a friendly track at the slash time, at double the slash time, at triple the slash time, and at quadruple the slash time, or more.

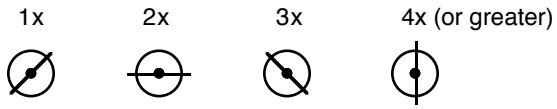

Figure 10.3-3 Different slashes appear for a friendly track at different time intervals.

If dead reckoning is turned on for a track with a slash time, the track is dead reckoned only to its position at the slash time. As more time elapses, the track remains at this position on the tactical display.

10.3.2 VIEW AND SET SLASH TIMES—MISC. LINK11

The MISC. LINK11 option lists the different types of Link-11 tracks. Using the symbols shown in the SLASH TIMES window for Link-11 (Figure10.3-4), a track can be plotted with a slash through the symbol, indicating that it has not been updated within the designated time. These slash time settings also control track dead reckoning limits.

Examples of the tracks plotted on the tactical display, with and without slashes, can be found in the *View and Set Slash Times—Cat/Threat* section.

To open the SLASH TIMES window for Link-11 tracks (Figure10.3-4), select MISC LINK-11 from the SLASH TIMES cascading menu.

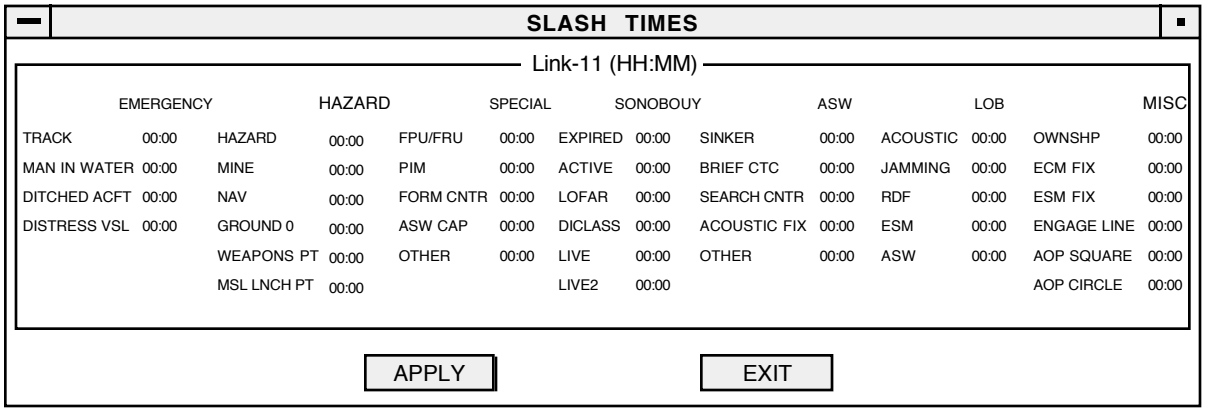

Figure 10.3-4 View and Set Slash Times for Misc. Link11

The SLASH TIMES window for Link-11 tracks contains 38 fields, each corresponding to different track symbology, grouped under the following headings: Emergency, Hazard, Special, Sonobouy, ASW, LOB, and Misc.

How to use the SLASH TIMES Window for Misc. Link11:

1. Enter the time that must elapse (since the most recent report) before a slash appears through the track symbol.
   a. Enter time values in hours and minutes (HH:MM).
   b. Maximum value is 99 hours 59 minutes.
   c. A value of 00:00 means that a slash is not to be plotted.
   d. A SET ALL option is available from the pop-up menu to set all the fields to the same time.
2. Click APPLY to accept new settings, or click EXIT to discard any changes made since the last APPLY.

Note: If dead reckoning is turned on for a track with a slash time, the track is dead reckoned *only* to its position at the slash time. As more time elapses, the track remains at this position on the tactical display.

10.3.3 SLASH TIMES POP-UP MENU

Select SET ALL from the pop-up menu to open the Cat/Threat or LINK-11 window (Figure10.3-5) and set all the fields to the same time.

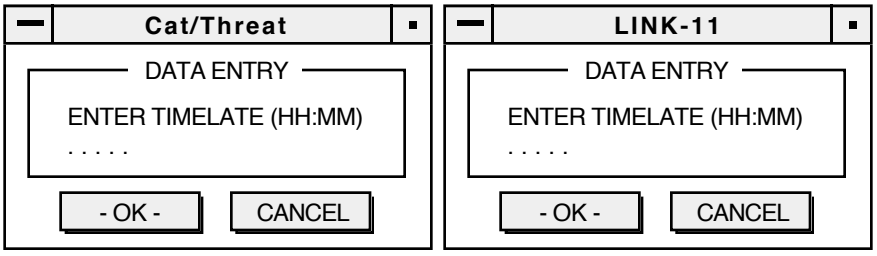

Figure 10.3-5 Cat/Threat Window

To set all fields in the SLASH TIMES window to the same time:

1. Enter the time in the TIMELATE field (DATA ENTRY box).
2. Click OK to accept the time, or click CANCEL to discard it.

10.4 AUTO PLOT-OFF

A track can be suppressed from view when it has not been updated within a certain time interval. Use the AUTO PLOT-OFF option to designate that time period for tracks of each type and threat.

The AUTO PLOT-OFF option contains two cascading menu options:

- CAT/THREAT
- MISC. LINK11

10.4.1 AUTO PLOT-OFF TIMES—CAT/THREAT

Select CAT/THREAT from the cascading menu to open the AUTO PLOT-OFF TIMES window (Figure10.4-1).

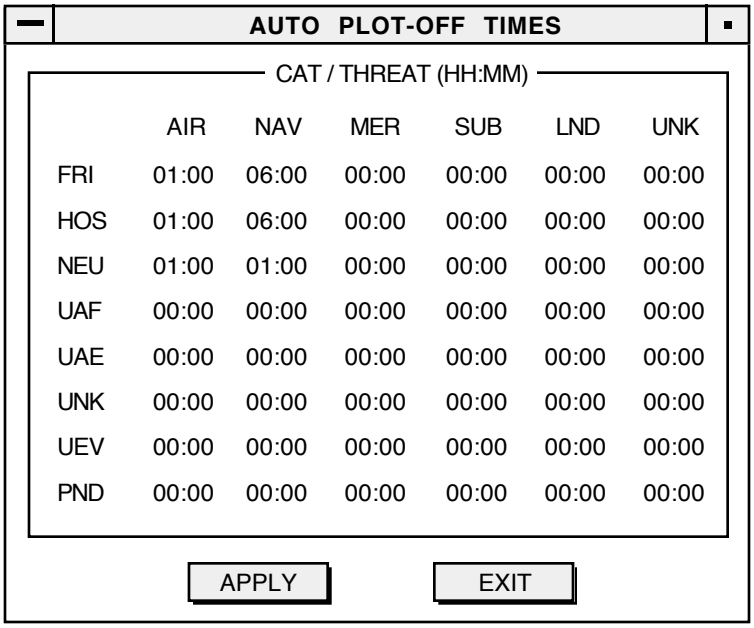

Figure 10.4-1 Auto Plot-Off Times Window

The AUTO PLOT-OFF TIMES window contains 48 fields, corresponding to different types of tracks.

Specifically, the 48 fields represent combinations of track types and track threats (Air, Navy, Merchant, Fishing, Submarine, Land, or Unknown Evaluated to be Friendly, Hostile, Neutral, Unknown Assumed Friendly, Unknown Assumed Enemy, Unknown, Unknown Unevaluated, or Pending).

How to use the AUTO PLOT-OFF TIMES Window for Cat/Threat:

1. Enter the time that must elapse (since the most recent report) before the track symbol is suppressed from view on the display.
   a. Enter time values in hours and minutes (HH:MM).
   b. Maximum value is 99 hours 59 minutes.
   c. A value of 00:00 means that a slash is not to be plotted.
2. Use one of the following methods to set auto plot-off times:
   - SET ALL option, available from the pop-up menu, can be used to set all the fields to the same time.
   - Set one column at a time by clicking the CAT heading (AIR, NAV, etc.). The CAT/THREAT window opens to enter the time value.
   - Set one row at a time by clicking the THREAT type (FRI, HOS, NEU, etc.).
   - Set each field individually.

3. Click APPLY to accept new settings, or click EXIT to discard any changes made since the last APPLY.

When the time elapses for a track and it disappears from view, the track still exists in the system, but is not visible on the tactical display.

Note: If a time is set for a particular track type in both the SLASH TIMES and AUTO PLOT-OFF options, and the time has elapsed for both settings, then the AUTO PLOT-OFF setting takes precedence and the track disappears from view.

10.4.2 AUTO PLOT-OFF TIMES—MISC. LINK11

Select MISC LINK11 from the cascading menu to open the AUTO PLOT-OFF TIMES window (Figure10.4-2)

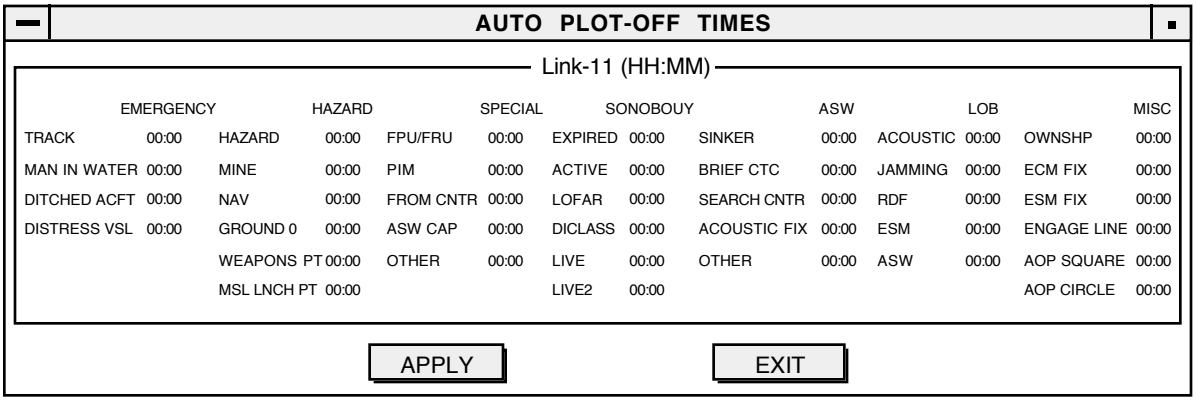

Figure 10.4-2 Auto Plot-Off Times for Misc. Link-11

The AUTO PLOT-OFF TIMES window for Link-11 tracks contains 38 fields, each corresponding to different track symbology, grouped under the following headings: Emergency, Hazard, Special, Sonobouy, ASW, LOB, and Misc.

The checkboxes for the LINK-11 auto plot-off times are different from those of other tracks, but the behavior of the window is identical to that described in *Auto Plot-Off Times—Cat/Threat*.

10.4.3 AUTO PLOT-OFF TIMES POP-UP MENU

Select SET ALL from the pop-up menu to open the CAT/THREAT or LINK-11 window (Figure10.4-3) and set all the fields to the same time.

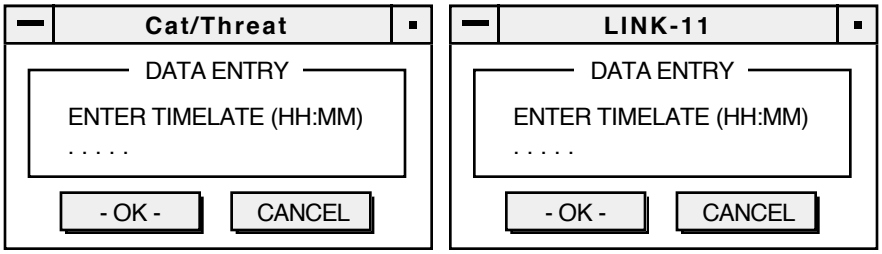

Figure 10.4-3 Cat/Threat Window

To set all fields in the AUTO PLOT-OFF TIMES window to the same time:

1. Enter the time in the TIMELATE field (DATA ENTRY box).
2. Click OK to accept the time, or click CANCEL to discard it.

10.5 TRACK TYPE TOGGLES

Use the TRACK TYPE TOGGLES option to specify the type of tracks that appear on the tactical display.

To access this window: PLOT CONTROL menu **:** TRACK TYPE TOGGLES option **:** TRACK TOGGLES window (Figure10.5-1).

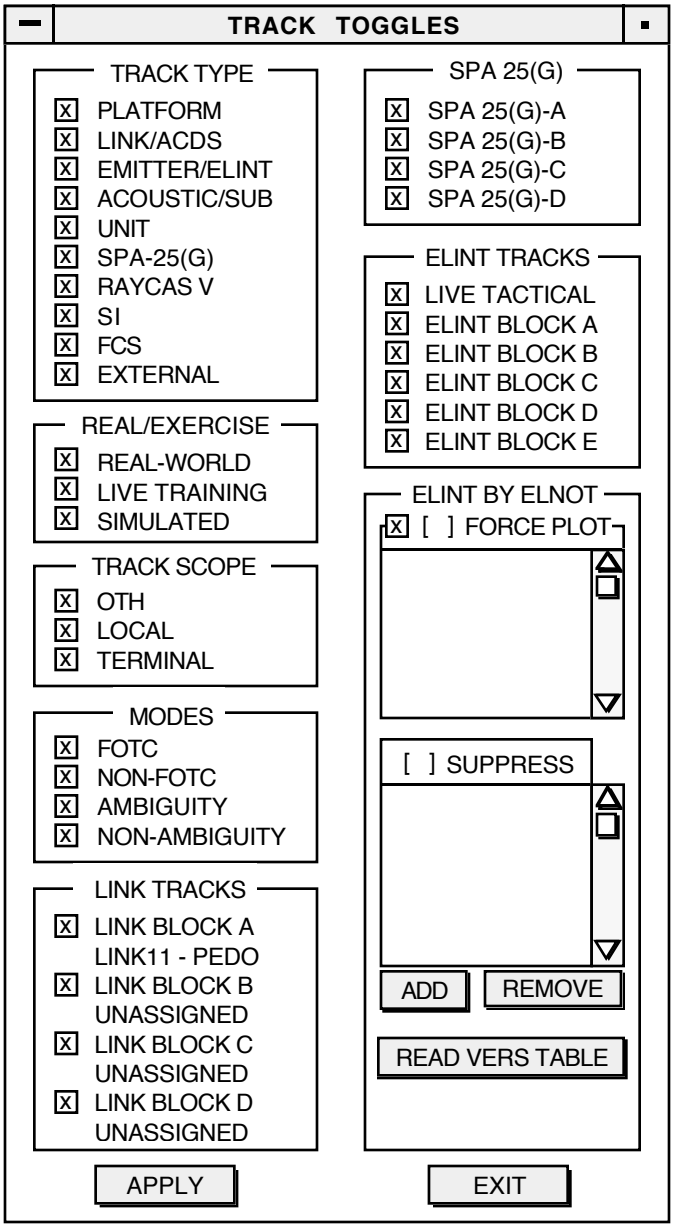

Figure 10.5-1 Track Toggles Window

The TRACK TOGGLES window contains TRACK TYPE, REAL/EXERCISE, TRACK SCOPE, MODES, LINK TRACKS, SPA 25(G), ELINT TRACKS, and ELINT BY ELNOT boxes. Each box contains checkboxes for track types that are similar.

How to use the TRACK TOGGLES Window:

1. Click the applicable checkbox ON to plot each track type.
2. Leave the checkbox blank for track types that are not to appear.

3. At least one of the FOTC or NON-FOTC checkboxes must be turned on.
4. At least one of the AMBIGUITY or NON-AMBIGUITY checkboxes must also be turned on.
5. Click checkboxes in the ELINT TRACKS box to receive up to six separate ELINT transmissions.
   - Plotting can be forced or suppressed for an ELINT track with a particular ELNOT.
   - A list of ELNOTS can be created by the user and displayed in the FORCE PLOT scroll list and the SUPPRESS scroll list.
6. Click READ VERS TABLE to import the ELNOT Version Table into the ELNOT list.
7. Click APPLY to accept any changes and have them take effect on the tactical display.
8. Click EXIT to leave this option and discard any changes made since the last APPLY.

10.5.1 TRACK TYPE BOX

The TRACK TYPE box contains checkboxes for the different track types in the system including Platform, Link/ACDS Emitter/ELINT, Acoustic/Sub, Unit, SPA 25(G), RAYCAS V, SI, FCS, and External.

Sometimes Platform and Unit tracks have other track types associated with them.

1. In those cases where Platform tracks are associated with other track types, click the PLATFORM checkbox ON to plot *only* the Platform tracks, even when other track type checkboxes are clicked ON. (Similarly for Unit tracks.)
2. Click the PLATFORM checkbox OFF to allow all associated track types with checkboxes clicked ON to plot. (Similarly for Unit tracks.)

10.5.2 REAL/EXERCISE BOX

The REAL/EXERCISE box contains checkboxes for Real-World, Live Training, and Simulated tracks, as defined in the following:

- REAL-WORLD tracks exist in the real world, such as ships, aircraft, submarines, and land units.

- LIVE TRAINING tracks are ships and other tracks that exist in the real world, but are used for exercise purposes. Live Training tracks may be assigned a different identity, such as a friendly track being identified as hostile for exercise purposes.
- SIMULATED tracks do not exist in the real world, but are used for exercise and scenario purposes.

10.5.3 TRACK SCOPE BOX

The TRACK SCOPE box contains checkboxes for OTH, Local, and Terminal tracks.

- OTH tracks can be transmitted to any JMCIS location.
- LOCAL tracks can be viewed only on machines in the local network.
- TERMINAL tracks can be viewed only on your individual machine.

10.5.4 MODES BOX

The MODES box contains checkboxes for FOTC, Non-FOTC, Ambiguity, and Non-Ambiguity tracks.

- At least one of the FOTC or NON-FOTC checkboxes must be turned on.
- At least one of the AMBIGUITY or NON-AMBIGUITY checkboxes must also be turned on.
- Both may be turned on for either pair.

10.5.5 LINK TRACKS BOX

The LINK TRACKS box contains checkboxes for four different Link interfaces.

- Receive up to four simultaneous Link transmissions.
- Keep transmissions separated by designating them Link A, Link B, Link C, and Link D.
- Use the COMMUNICATIONS option from the COMMS pull-down menu to assign the different Link interfaces to Link A, Link B, Link C, and Link D.

10.5.6 SPA 25(G) BOX

The SPA 25(G) box contains checkboxes for four AN/SPA-25(G) interfaces.

- Receive up to four simultaneous SPA 25(G) transmissions.

- Keep transmissions separated by designating them A, B, C, or D.
- Use the COMMUNICATIONS option from the COMMS pull-down menu to assign these designations.

10.5.7 ELINT TRACKS BOX

The ELINT TRACKS box contains checkboxes for six different ELINT interfaces.

- Receive up to six simultaneous ELINT transmissions.
- Keep transmissions separated by designating them as Live Tactical or blocks A, B, C, D, or E, which represent partitions in the database.
  - Any ELINT track in a partition (A, B, C, D, E) can interact only with other ELINT tracks from the same partition. NU-TRK cannot be applied to ELINT tracks in partitions A to E.
  - ELINT tracks in no partition (N) can interact with other track types and those ELINT tracks not in a partition. Valid interactions are correlation, resolve, merge, and association.
  - If an ELINT track is in a partition, changing the scope to OTH will remove it from the partition and it will have a value of N (use SCOPE AND TYPE pop-up option in the track's EDIT window).
- A new ELINT track, added manually, defaults to the Live Tactical partition.
- Use the COMMUNICATIONS option (COMMS pull-down menu) to assign partitions.

10.5.8 ELINT BY ELNOT

The ELINT BY ELNOT box contains options to plot a track or to suppress it from view on the tactical display.

FORCE PLOT Scroll List—an ELNOT checked in the FORCE PLOT list will force all ELINTs with that given ELNOT to plot regardless of other controls checked in the window.

SUPPRESS Scroll List—if an ELNOT is checked in the SUPPRESS list, it will not plot regardless of other controls checked in the window.

Note: If a given ELNOT is checked in the FORCE PLOT list, the user will be prevented from checking the same ELNOT in the SUPPRESS list. A warning window appears if checkboxes are toggled on for identical ELNOTS.

ADD—adds an ELNOT to the SUPPRESS and/or FORCE PLOT lists.

1. Enter up to five alphanumeric characters in the ENTER ELNOT field. The first character must be alphabetical.
2. Click OK to accept the ELNOT entry, or CANCEL to ignore it.

REMOVE—an ELNOT from the SUPPRESS and/or FORCE PLOT lists.

READ VERS TABLE—opens the ELNOT Version Table from TRACK TABLES option (TRACKS pull-down menu) and places ELNOTS into the FORCE PLOT and SUPPRESS windows. Duplicate ELNOTS are not allowed.

10.6 TRACK TYPE HILITES

Use the TRACK TYPE HILITES option to override standard colors for specified track types. Standard colors can be replaced with user-defined choices.

- To appear on the tactical display, any track type turned on with the TRACK HILITES option must also be turned on with the TRACK TYPE TOGGLES option.
- If a track type is turned off with the TRACK TYPE TOGGLES option, the TRACK HILITES option will have no effect on that track type.
- Turn on or off the track hilite override for any of the track types, and change the color for any track type that is turned on.

To access this window: PLOT CONTROL menu **:** TRACK TYPE HILITES option **:** TRACK HILITES window (Figure10.6-1).

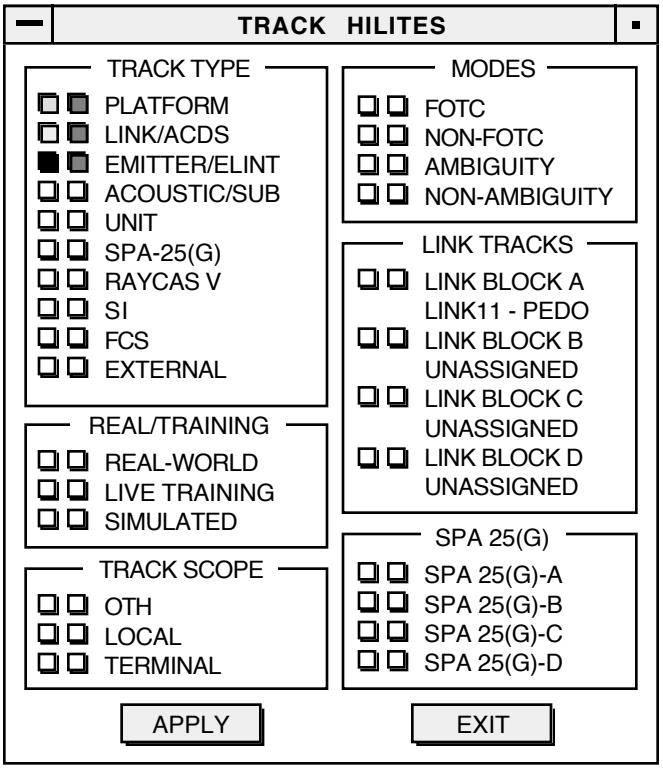

Figure 10.6-1 Track Hilites Window

The TRACK HILITES window contains six groups of checkboxes: TRACK TYPE, REAL/TRAINING, TRACK SCOPE, MODES, LINK TRACKS, and SPA 25(G). Each box contains checkboxes and color boxes for track types that are similar.

How to use the TRACK HILITES Window:

1. Click any checkbox to turn it on. That track type will plot in a color other than the standard colors.
2. Leave the checkbox blank for track types to plot in standard colors.
3. Click the appropriate color box to show the color list. Highlight a color from the list to plot that track type in the selected color.
4. Settings in other boxes *override* the settings in the TRACK TYPE box.

   For example, if SPA 25(G) is toggled on and set to yellow in the TRACK TYPE box, then toggled on and set to green in the SPA 25(G) box, the SPA 25(G)-A tracks will appear in *green*, not yellow.
5. Click APPLY to accept changes and have them take effect on the tactical display.
6. Click EXIT to leave this option and discard changes made since the last APPLY.

10.6.1 TRACK TYPE BOX

The TRACK TYPE box contains checkboxes for the different track types, including Platform, Link/ACDS, Emitter/ELINT, Acoustic/Sub, Unit, SPA 25(G), Raycas V, SI, FCS, and External.

10.6.2 REAL/TRAINING BOX

The REAL/TRAINING box contains checkboxes for Real-World, Live Training, and Simulated tracks.

- REAL-WORLD tracks exist in the real world, such as ships, aircraft, submarines, and land units.
- LIVE TRAINING tracks are ships and other tracks that exist in the real world, but are used for exercise purposes. For example, Live Training tracks may be assigned a different identity, such as a friendly track being identified as hostile for exercise purposes.
- SIMULATED tracks do not exist in the real world, but are used for exercise and scenario purposes.

10.6.3 TRACK SCOPE BOX

The TRACK SCOPE box contains checkboxes for OTH, Local, and Terminal tracks.

- OTH tracks can be transmitted to any other UB locations.
- LOCAL tracks can be viewed only on the local network.
- TERMINAL tracks can be viewed only on individual workstations.

10.6.4 MODES BOX

The MODES box contains checkboxes for FOTC, Non-FOTC, Ambiguity, and Non-Ambiguity tracks.

10.6.5 LINK TRACKS BOX

The LINK TRACKS box contains checkboxes for four Link interfaces.

- Receives up to four simultaneous Link transmissions.
- Keep transmissions separate by designating them Link A, Link B, Link C, and Link D.

- Use the COMMUNICATIONS option from the COMMS pull-down menu to assign the different Link interfaces to Link A, Link B, Link C, and Link D.

10.6.6 SPA 25(G) BOX

The SPA 25(G) box contains checkboxes for four AN/SPA-25(G) interfaces.

- Receives up to four simultaneous SPA 25(G) transmissions.
- Keep transmissions separate by designating them an A, B, C, or D.
- Use the COMMUNICATIONS option from the COMMS pull-down menu to assign these designations.

10.7 TRACK CONTROL

The TRACK CONTROL option allows an operator to specify plotting and symbol annotation of tracks on an individual basis, or a selected group of tracks.

This option provides the same function as the TRACK CONTROL option in the track's right pop-up menu.

10.7.1 USING TRACK CONTROLS

Use the TRACK CONTROL option to set individual track preferences. These settings override those set (usually as defaults) from PLOT CONTROL pull-down menu options.

Select a track from the display, then choose TRACK CONTROL from the TRACK pop-up menu to open the TRACK CONTROL window (Figure10.7-1).

Note: If more than one track (or no track) is selected before this option is chosen, the SELECT TRACK window opens initially to allow track choices.

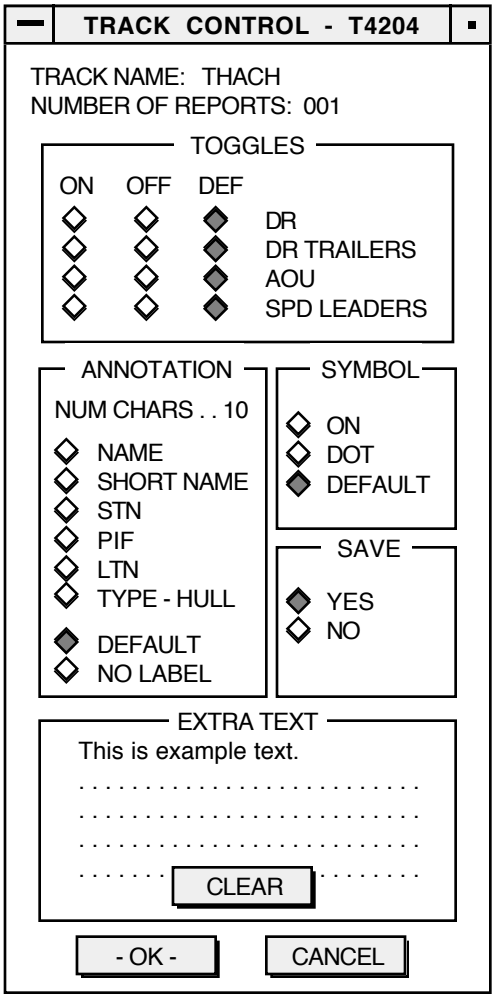

Figure10.7-1 Track Control Window

The TRACK CONTROL window shows the name and the number of reports received for the track.

TRACK CONTROL Window Fields

TOGGLES Box

Use the diamond knobs to override the track display settings for DR (dead reckoning), DR TRAILERS, AOU (areas of uncertainty), and SPD LEADERS (speed leaders) for the selected track. Settings entered here override the default settings entered with the ATTRIBUTE TOGGLES option. Click the following diamond knobs for the selected track:

ON
Turn ON the option for the selected track, regardless of default settings.

OFF
Turn OFF the option for the selected track, regardless of default settings.

DEF
Use the default setting for the option.

SYMBOL Box

Click the appropriate diamond knob to specify how the track symbol should be plotted:

ON
Plotted on the tactical display.

DOT
Plotted as a dot on the display.

DEFAULT
Toggle ON to use the track's default symbol setting.

SAVE Box

YES
Save the symbol settings.

NO
Ignore the symbol settings.

ANNOTATION Box

The number of characters and label type chosen with this option overrides the default settings entered with the SYMBOL LABELS option.

NUM CHARS
Enter the maximum number of characters to display for the text label.

NAME
Name of the track.

SHORT NAME
Name for the track that meaningful only within the local network. This name is not transmitted to other locations.

STN
System track number. This is also known as the Naval Tactical Display System (NTDS) track number.

PIF
Code that provides an exact ID for the ship or aircraft. PIF (also known as Mode 2 IFF) is for friendly military only.

LTN
Local UB track number. This number is used internally by the system for track identification.

TYPE - HULL
Ship type and hull number combined; helps track and plot ships of the same type.

DEFAULT
Use the default label type entered with the SYMBOL LABELS option.

NO LABEL
The track is not labeled.

EXTRA TEXT Box

Enter up to four lines of text to appear next to the track on the tactical display. This annotation detail may be useful in preparing briefing slides, or presenting exercise analyses.

CLEAR
Remove all the text in the EXTRA TEXT box.

OK—accept changes, or click CANCEL to discard them. If OK is clicked, any changes made to the track symbol or label appear on the tactical display.

10.8 ATTRIBUTE TOGGLES

The ATTRIBUTE TOGGLES option enables or disables the following plot features: AOUs, speed leaders, dead reckoning, and DR trailers.

The ATTRIBUTE TOGGLES option contains two cascading menu options:

- CAT/THREAT
- MISC. LINK11

10.8.1 USING ATTRIBUTE TOGGLES

Select CAT/THREAT from the ATTRIBUTE TOGGLES cascading menu to open the ATTRIBUTE TOGGLES window (Figure 10.8-1).

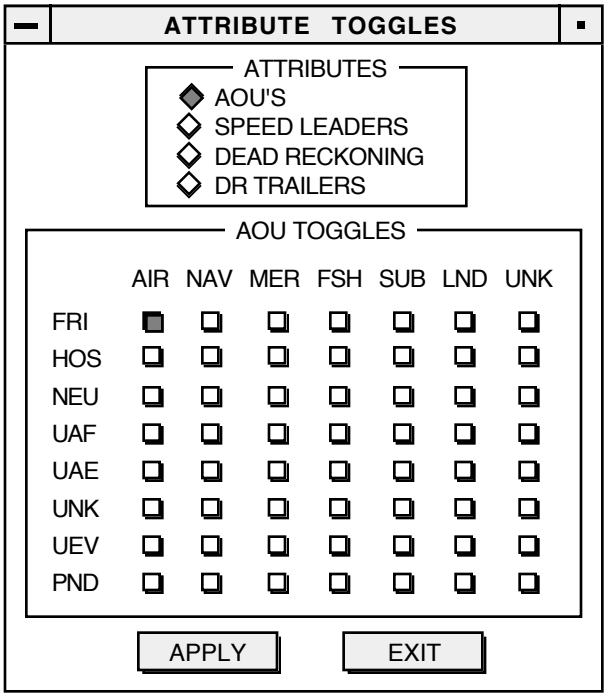

Figure 10.8-1 Attribute Toggles Window for Cat/Threat

The ATTRIBUTE TOGGLES window contains two boxes: The ATTRIBUTES box and a bottom box whose title changes, depending on which diamond knob is selected in the ATTRIBUTES box. For example, if the AOU's diamond knob is selected, the bottom box is titled AOU TOGGLES.

How to use the ATTRIBUTE TOGGLES Window for Cat/Threat:

1. Select one of the diamond knobs in the ATTRIBUTES box: AOU's, SPEED LEADERS, DEAD RECKONING, or DR TRAILERS.
2. The appropriate checkboxes are shown in the bottom box.
3. Select a particular attribute by clicking its checkbox to turn it ON. Click the checkbox again to turn it OFF.
   a. Click a column label to select all attributes for that column. For example, click the AIR label and all checkboxes under that label are selected.
   b. Click the label again to deselect all checkboxes under the label.
   c. Similarly, click a row label to select or deselect all attributes for that row.
4. Repeat steps 1–3 for each diamond knob in the ATTRIBUTES box to set the associated toggles in the bottom box.
5. Click APPLY to accept the new settings.

6. Click EXIT to leave the option and discard changes made since the last APPLY.

10.8.2 ATTRIBUTE TOGGLES FOR MISC. LINK11

Select MISC LINK11 from the ATTRIBUTE TOGGLES cascading menu to open the ATTRIBUTE TOGGLES window (Figure10.8-2).

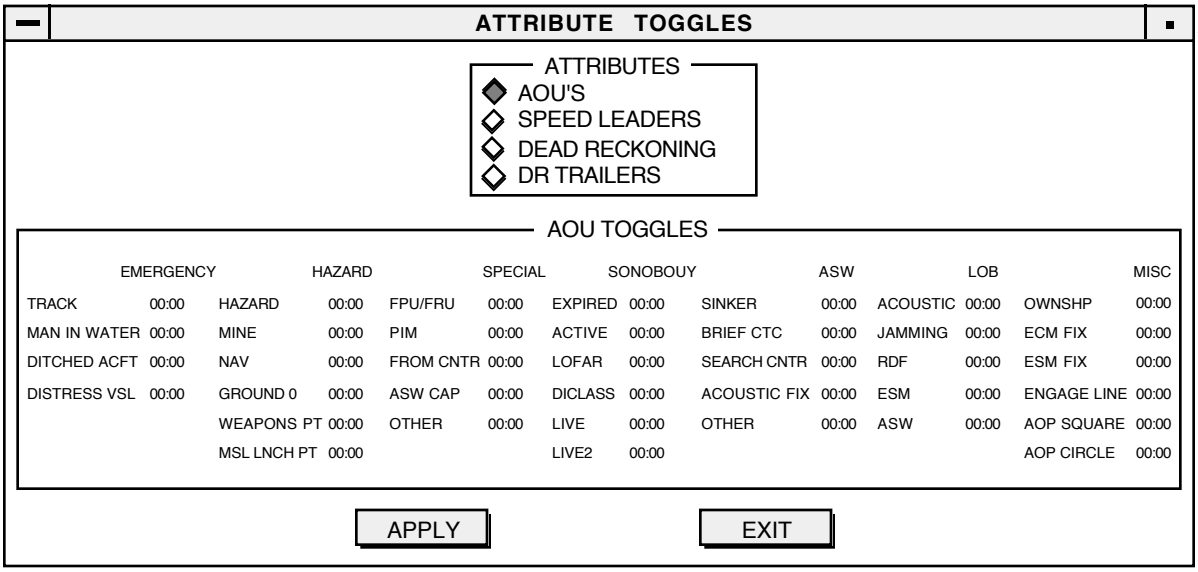

Figure 10.8-2 Attribute Toggles for Misc. Link11

The checkboxes for the Link-11 attributes are different from those of other tracks, but the window functions are identical to those described in *Using Attribute Toggles*, with the following exception:

- Clicking on a row label has no meaning in this window.

10.8.3 ATTRIBUTE TOGGLES EXAMPLES

Turning the attribute checkboxes ON or OFF changes the appearance of tracks. The following subsections show examples of these changes.

10.8.3.1 AOUs

An AOU is the *area of uncertainty* for a position report of a track. (An AOU can be set manually with the NEW TRACK or EDIT option from the TRACKS pull-down menu.)

About AOUs

- The AOU represents the area where the track is most likely to be, based on the track's last report and the reporting accuracy of the sensor that detected the track.
- AOUs may appear as ellipses, bearing boxes, or lines of bearing, depending on the report received for the track.
- If the AOU checkbox is turned on for a track type, AOUs are plotted for tracks of that type.
- If the checkbox is turned off, AOUs are not plotted.

Figure10.8-3 shows a track with the AOU turned off (left view), and the same track with the AOU turned on (right view).

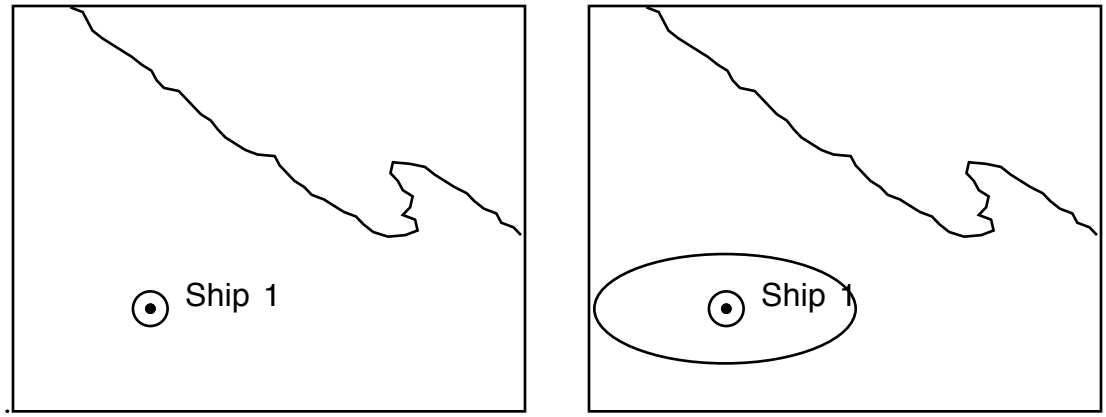

Figure 10.8-3 Using the AOU checkbox.

10.8.3.2 Speed Leaders

A Speed Leader is a short line that extends from a track, indicating the direction of travel.

About Speed Leaders

- Speed Leader direction is determined by the course entered for the track in its most recent track report.
- If the Speed Leader checkbox is turned on for a track type, Speed Leaders are plotted.
- If the checkbox is turned off, the Speed Leaders are not plotted.

Figure10.8-4 shows a track with the Speed Leader turned off (left view), and the same track with the Speed Leader turned on (right view). In this example, the speed leader extends directly west from the track because the course for the track is 270.0T.

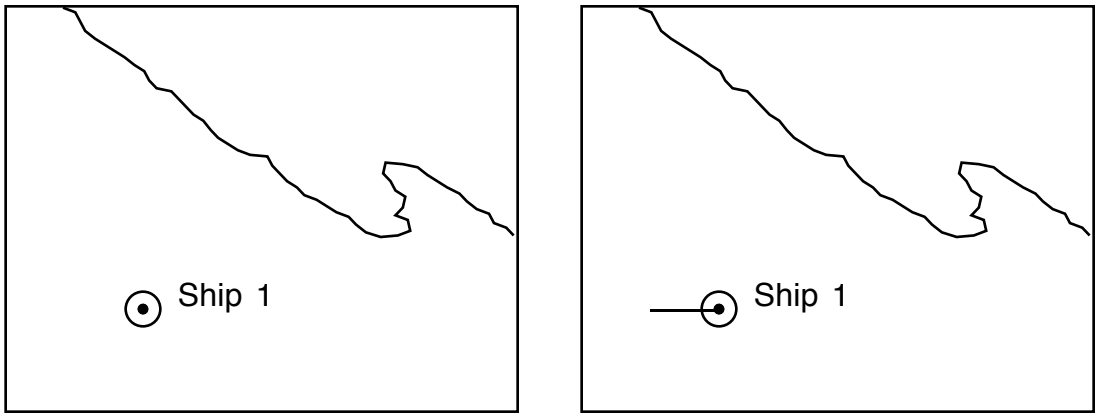

Figure 10.8-4 Using the Speed Leader Checkbox

Speed leader length is proportional to the speed of the track. For example: If the track is an aircraft traveling at a speed greater than 500 knots, its Speed Leader is longer than it is for an aircraft traveling at 500 knots or less.

10.8.3.3 Dead Reckoning

A track's position can be shown one of two ways:

1. In its position at the time of the last history report.
2. In its dead reckoned (DR) position.

DR uses the course and speed of the track from the last report, and calculates where the track should be at present. The track is then plotted where it should be at the present time, assuming the course and speed are unchanged.

- If the Dead Reckoning checkbox is turned on for a track type, those tracks are plotted in their dead reckoned position.
- If the checkbox is turned off, the tracks are shown at their last reported position.

Figure10.8-5 shows a track with Dead Reckoning turned off, and the same track with Dead Reckoning turned on. The position of the track moves in the direction of the speed leader when DR is turned on. This indicates where the track really *should be* at the present time, assuming course and speed are unchanged from the last report.

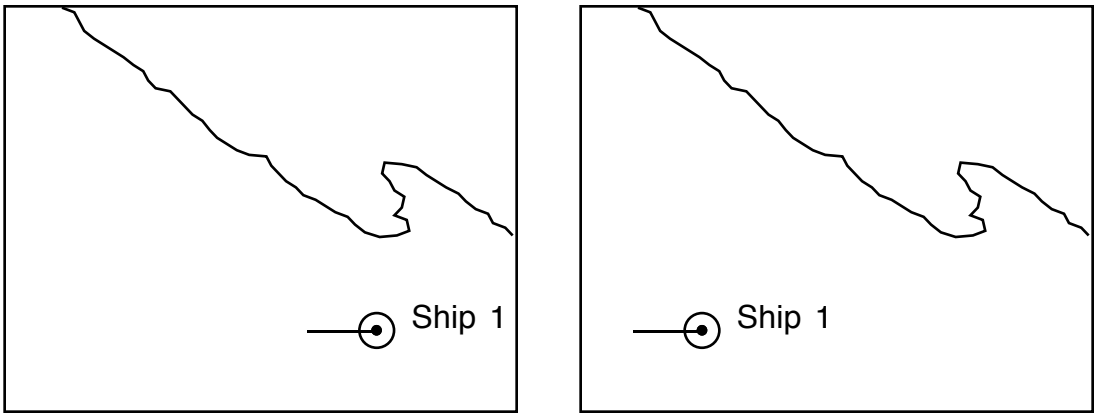

Figure 10.8-5 Using the Dead Reckoning Checkbox

Note 1: If Dead Reckoning is turned on for a track with a slash time, the track is dead reckoned to its position at the slash time. As time elapses, the track remains at this position on the tactical display.

Note 2: If the last history report has no course or speed, UB assumes the course is 0 degrees and the speed is 0 KTS. Thus, with no course or speed reported, Dead Reckoning has no effect. If a speed is reported but not a course, UB assumes a course of 0 degrees and Dead Reckoning *will* have an effect.

10.8.3.4 DR Trailers

DR Trailers show a dotted line from the track's dead reckoned position, to the last reported position for the track. DR Trailers also:

- Provide a visual cue that a track's position is being dead reckoned and not reporting at its actual position.
- Take effect only after Dead Reckoning is turned on for a track type.

If the DR Trailers checkbox is turned on for a track type (and the Dead Reckoning checkbox is also turned on for that type), tracks of that type are plotted in their dead reckoned positions on the tactical display, with DR Trailers extending back to their last reported positions.

If the checkbox is turned off, tracks are shown without DR Trailers.

Figure10.8-6 shows a track with DR Trailers turned off (left view), and the same track with DR Trailers turned on (right view). In both views, Dead Reckoning is turned on.

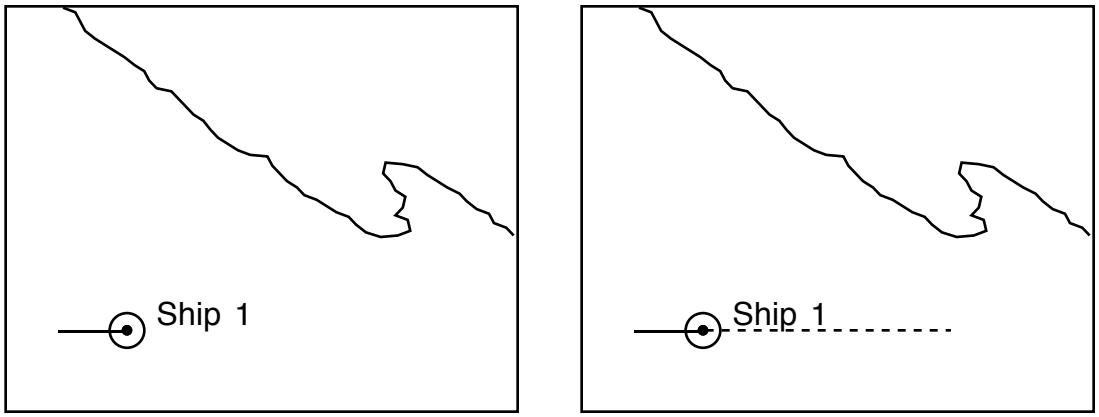

Figure 10.8-6 Using DR Trailers Checkbox

10.9 SYMBOLS ON/OFF/DOTS

Use the SYMBOLS ON/OFF/DOTS option to control whether different track types are plotted with standard symbols, plotted as dots, or not plotted at all.

The SYMBOLS ON/OFF/DOTS option contains three cascading menu options:

- CAT/THREAT
- MISC. LINK-11
- UNITS

10.9.1 SYMBOLS ON/OFF/DOTS—CAT/THREAT

To access this window: PLOT CONTROL menu **:** SYMBOLS ON/OFF DOTS option **:** CAT/THREAT cascading menu option **:** SYMBOLS ON/OFF/DOTS window (Figure 10.9-1).

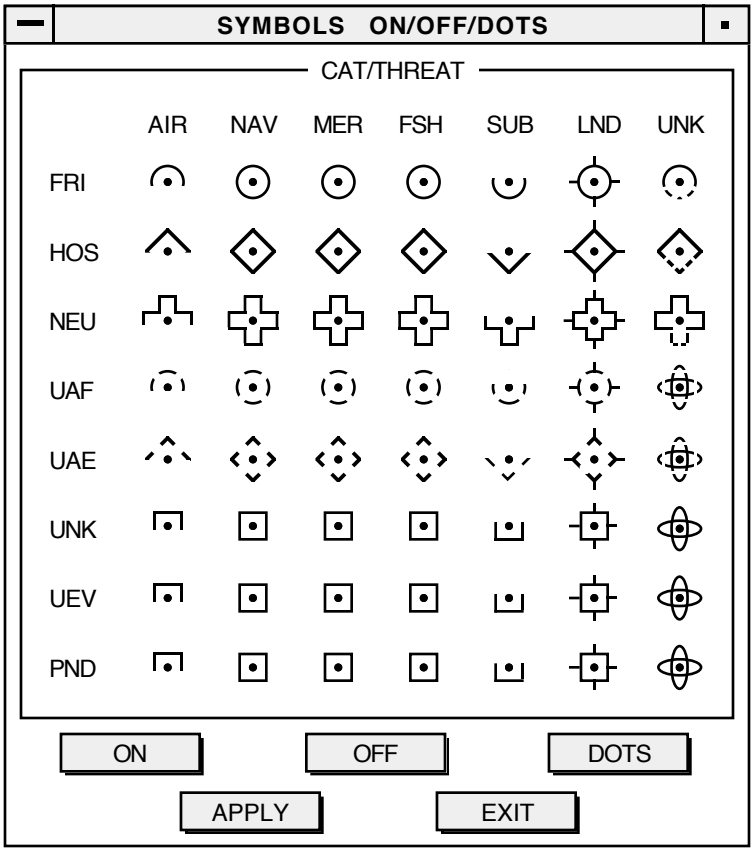

Figure 10.9-1 Symbols On/Off/Dots Window for Cat/Threat

The Cat/Threat SYMBOLS ON/OFF/DOTS window contains colored track symbols that illustrate how each cat/threat track type will appear when plotted with a symbol. The threat categories are associated with the following colors:

FRI = Light Blue

HOS = Red

NEU = Green

UAF = Light Blue

UAE = Red

UNK = Yellow

UEV = Yellow

PND = Yellow

Each cat/threat track type plots as one of the following:

- With standard NTDS symbols (as illustrated in the SYMBOLS ON/OFF/DOTS window) in the specified colors—including any slashes, speed leaders, or other plot information.

- As dots, the same color as the symbol.
- Not plotted (shown in dark blue).

How to use the SYMBOLS ON/OFF/DOTS Window for Cat/Threat:

1. Use the ON, DOTS, or OFF button to set the display mode of *all* cat/threat track types.
   - ON—plot all cat/threat types as symbols.
   - DOTS—plot all cat/threat types as dots.
   - OFF—do not plot any cat/threat types (plot as dark blue symbols).
2. To modify the display of an individual cat/threat track type, click directly on the symbol to toggle between a symbol, dot, and off.
3. To modify the display of an entire row or column, click on the row or column label to toggle between a symbol, dot, and off.
4. Click APPLY to accept the settings.
5. Click EXIT to leave the option and discard any changes made since the last APPLY.

Note: Override the track symbol settings through the TRACK CONTROL window. Settings made in this window have priority over settings made in the SYMBOLS ON/OFF/DOTS window.

10.9.2 SYMBOLS ON/OFF/DOTS—MISC. LINK-11

To access this window: PLOT CONTROL menu **:** SYMBOLS ON/OFF DOTS option **:** MISC. LINK11 cascading menu option **:** SYMBOLS ON/OFF/DOTS window (Figure10.9-2).

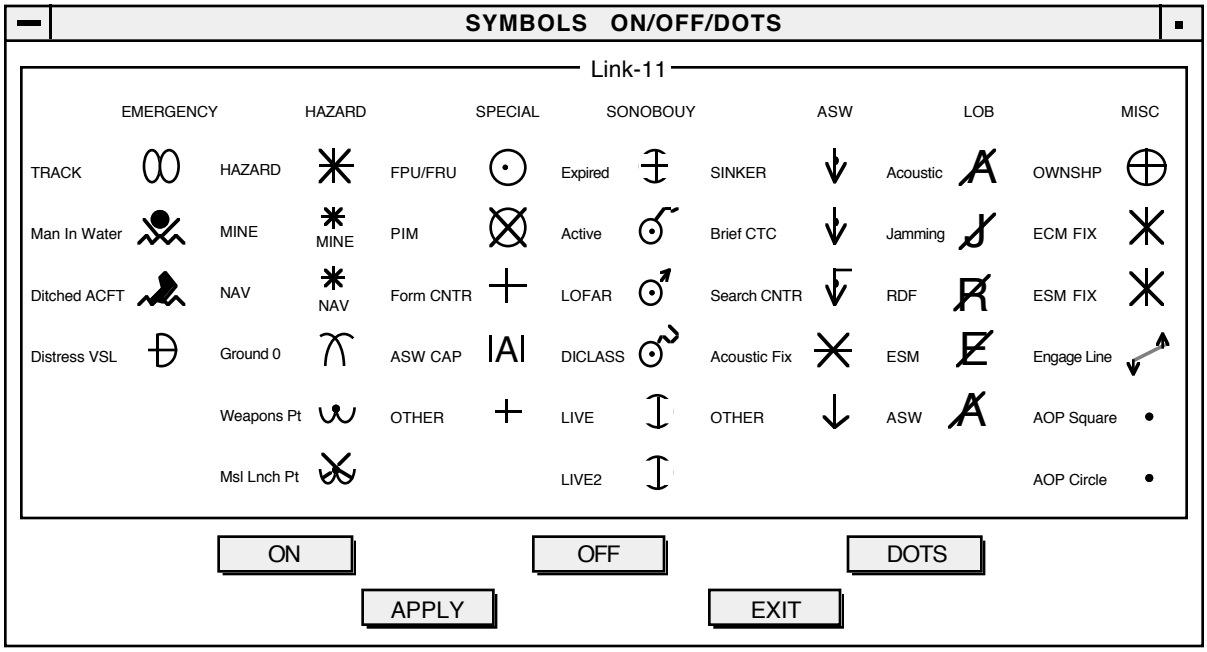

Figure 10.9-2 Symbols On/Off/Dots Window for Link-11

The window lists the Link-11 tracks by category—EMERGENCY, HAZARD, SPECIAL, SONOBOUY, ASW, LOB, and MISC. When toggled on, tracks will display for each track type selected.

Note: For small monitors, this entire window does not appear. Use the scroll bar to view items not visible.

Checkboxes for Link-11 track types are different from those of other tracks, but the window functions as described in *Symbols On/Off/Dots—Cat/Threat*, with the following exceptions:

- Symbols and dots are plotted in light blue.
- Clicking on a row label has no meaning in this window.

Caution: Track types in the LOB column and the Engage Line track type cannot be plotted as dots, as these track types normally appear as lines. A plotted dot would be meaningless for these types.

10.9.3 SYMBOLS ON/OFF/DOTS—UNITS

Select UNITS from the SYMBOLS ON/OFF DOTS cascading menu to open the SYMBOLS ON/OFF/DOTS window (Figure 10.9-3).

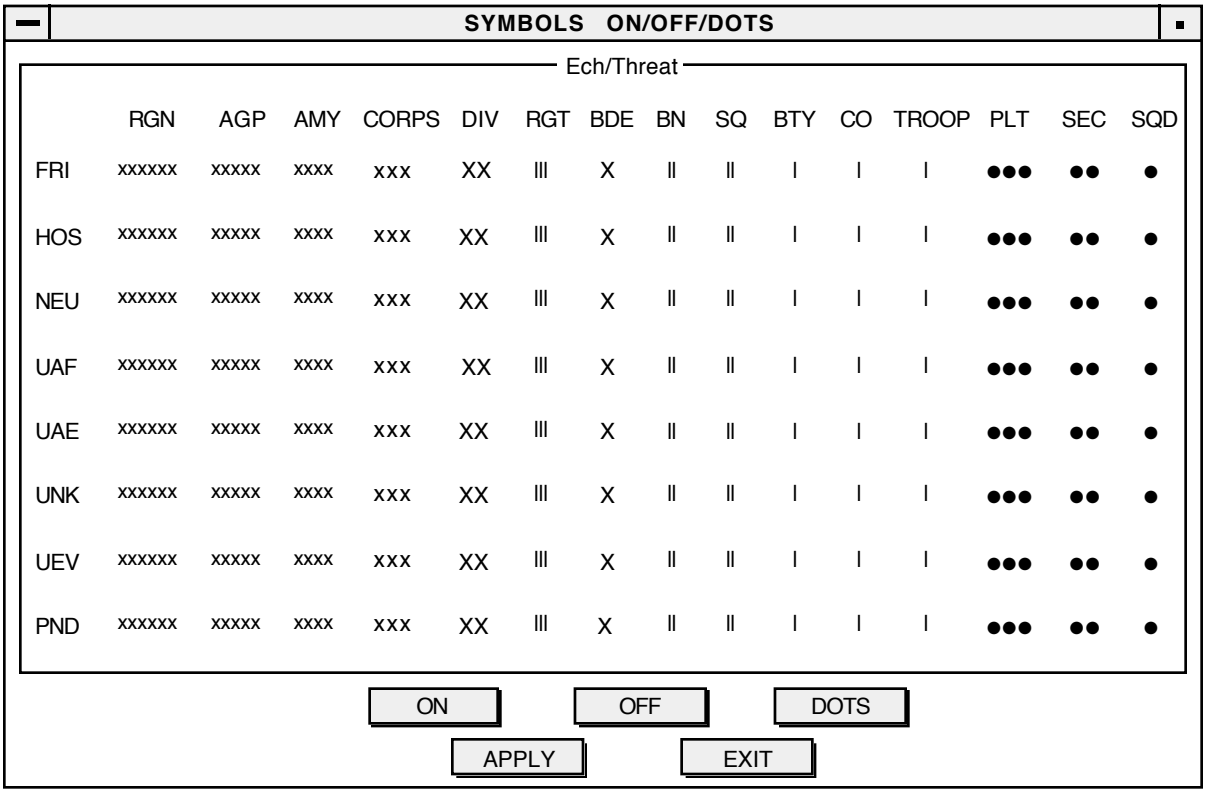

Figure 10.9-3 Symbols On/Off/Dots Window for Ech/Threat

The window contains a table of the Echelon levels for unit tracks and their threat status. Note: Not all available echelon levels are shown.

When turned on, these symbols plot above the unit track symbol for each echelon/threat.

The checkboxes for Ech/Threat are different from those of other tracks, but the colors associated with each threat category and the window functions are identical to those described in *Symbols On/Off/Dots—Cat/Threat*.

10.10 STORED PLOT CONTROLS

The STORED PLOT CONTROLS option provides the capability of storing—and retrieving—user-defined plot control settings.

To access this window: PLOT CONTROL menu **:** STORED PLOT CONTROLS option **:** STORED PLOT CONTROLS window (Figure10.10-1).

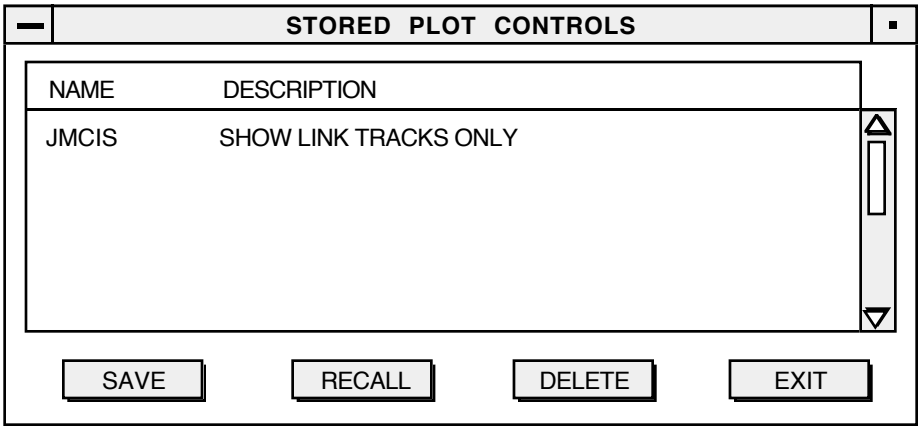

Figure 10.10-1 Stored Plot Controls Window

STORED PLOT CONTROL Buttons

SAVE—currently displayed plot settings. Described in *Save Plot Control Settings.*

RECALL—saved plot control settings.

DELETE—a stored plot setting.

1. Select the entry from the STORED PLOT CONTROL window list.
2. Click DELETE. A confirmation window appears.
3. Click OK to continue (or CANCEL to ignore the delete). If OK is clicked, the entry is removed from the list and the system.
   - Only user-created settings can be deleted. System defaults cannot be deleted by the user.

EXIT—the option and close the window.

STORED PLOT CONTROLS Window Pop-up Menu Options

Pop-up menu options (described in *STORED PLOT CONTROLS Pop-up Menu*): ARCHIVE, DELETE, EXIT, HELP, PRINT, RECALL, RESTORE, SAVE, SELECT ALL, and UNSELECT ALL.

STORED PLOT CONTROL Fields

NAME
Reflects the user role of the operator creating the stored controls. This field is view only and cannot be edited.

DESCRIPTION
Enter a description (up to 60 characters) of the stored controls.

10.10.1 SAVE PLOT CONTROL SETTINGS

To store user-defined track control settings:

1. Set track controls with options from the PLOT CONTROLS pull-down menu.
2. Select the STORE PLOT CONTROL option.
3. Click SAVE from the STORED PLOT CONTROLS window.
4. The ENTER DESCRIPTION window (Figure 10.11-2) opens to enter up to 60 characters to describe the saved controls.
5. Click OK to save the description, or click CANCEL to discard it.
6. If OK is clicked, the STORED PLOT CONTROLS window shows the entry in the list area.
7. Click EXIT to close the window and exit the option.

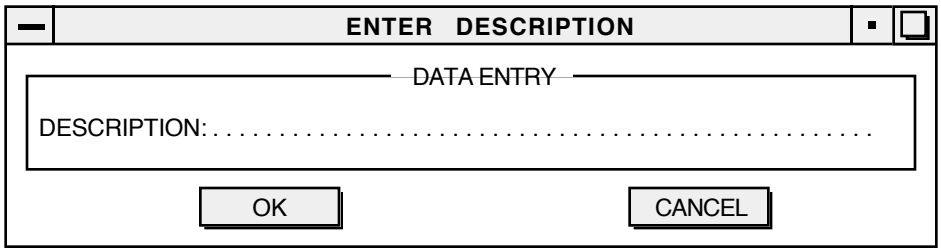

Figure 10.10-2 Enter Description Window

10.10.2 STORED PLOT CONTROLS POP-UP MENU

In addition to the options described in *Summary of Common Operations* (ARCHIVE, DELETE, EXIT, HELP, PRINT, RESTORE, SAVE, SELECT ALL, and UNSELECT ALL) or that function as buttons of the same name, the STORE PLOT CONTROLS pop-up menu also includes:

RECALL

Use this pop-up option to recall to the display a user-defined plot control setting.

1. Select the item from the STORED PLOT CONTROLS list.
2. Choose the RECALL pop-up item.
3. The tactical display reflects the plot controls of the recalled settings.

10.11 FILTERED TRACKS

Use the FILTERED TRACKS option to show a listing of all or only those tracks affected by filters set through various PLOT CONTROL options.

To access this window: PLOT CONTROL menu **:** FILTERED TRACKS option **:** TRACKS FILTERED window (Figure10.11-1).

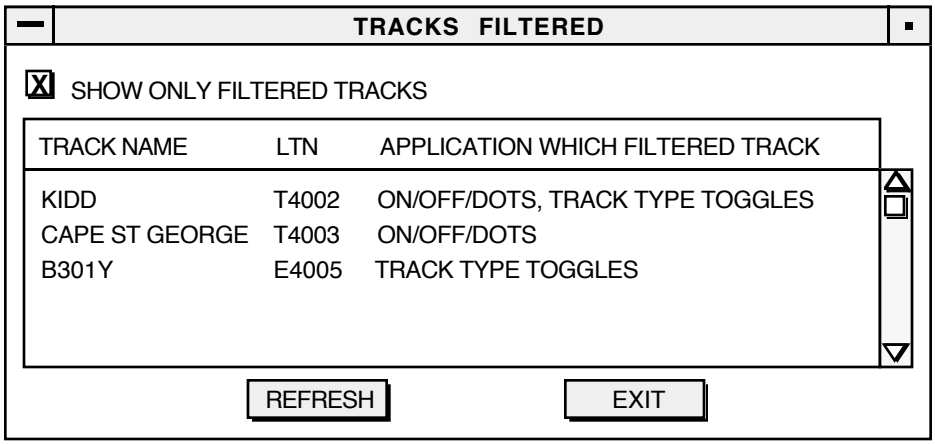

Figure 10.11-1 Tracks Filtered Window

When the TRACKS FILTERED window initially opens, *all* tracks in the system are listed by TRACK NAME and LTN.

How to use the TRACKS FILTERED window:

1. Toggle the SHOW ONLY FILTERED TRACKS checkbox ON (Figure 10.11-2).
2. The summary list contains the name of the track (or contact) and the plot toggle(s) and timelate filters that caused the track to be filtered from the display.
   - If more than one reason exists for the filter, they are shown on the same line.
   - Click a column heading to re-sort the list on that column.
3. Click REFRESH to update the window and show any tracks that have entered the database since the window was last opened.
4. Click EXIT to close the window and exit the option.

The following figure shows the TRACKS FILTERED window with the SHOW ONLY FILTERED TRACKS checkbox toggled ON:

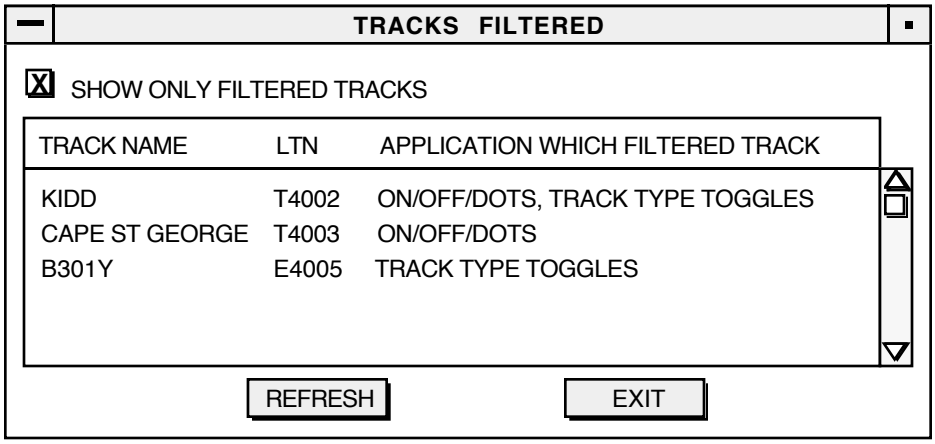

Figure 10.11-2 Filtered Tracks only

TRACKS FILTERED Window Pop-Up Menu

Pop-up menu options function the same as buttons in the window: REFRESH and EXIT.

10.12 G-SIT

Use the G-SIT option to view tracks and other plotted information at a previous DTG. This option is useful to compare a previous DTG view with the current tactical display.

How to use the G-SIT option:

1. Select a track or a group of tracks before selecting the G-SIT option.
2. Only those tracks selected will be shown while the G-SIT option is in use.
3. Identify a reference track on which to center the tactical display.
4. Specify the previous DTG to view the selected tracks that are currently plotted on the display.
5. Move backward or forward incrementally.
6. EXIT from the option.

Select tracks to display:

1. Select a track or a group of tracks on the tactical display.
2. If no tracks are selected when this option is chosen, the DATABASE SEARCH window appears to enable a search for tracks.

a. Enter the search criteria in the DATABASE SEARCH window and click OK. (For more information on the DATABASE SEARCH window, refer to *SEARCH* in the TRACKS chapter.)

b. If more than one track fits the search criteria, the SELECT GSIT TRACKS window appears.

c. From this window, select only those tracks to display when viewing track positions in the past, and click OK.

Specify a reference track:

1. If only one track is selected, it is the reference track.
2. If a group of tracks is selected from the tactical display or by using DATABASE SEARCH, the SELECT REFERENCE TRACK window appears (Figure 10.12-1).
3. In the scrolling list, choose the track to center the tactical display and click OK. (Click CANCEL to discard the G-SIT request.)

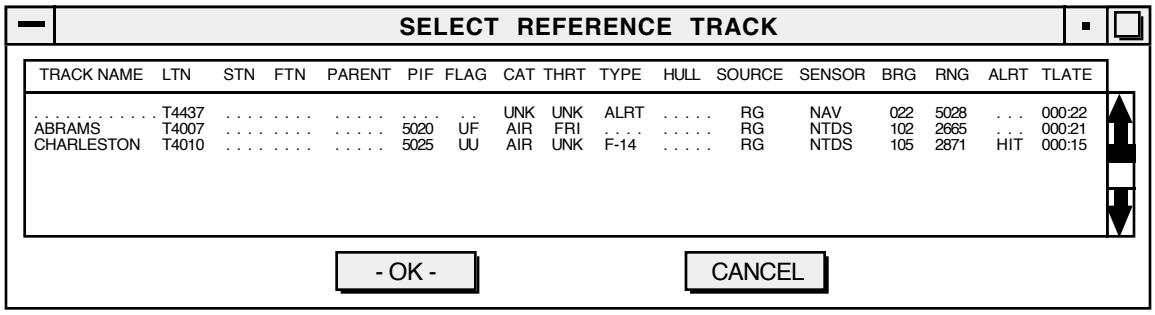

Figure 10.12-1 Select Reference Track Window

About the GSIT window:

The GSIT window (Figure 10.12-2) appears (1) if one track is selected when the G-SIT option is selected, or (2) when a track is chosen from the SELECT REFERENCE TRACK window.

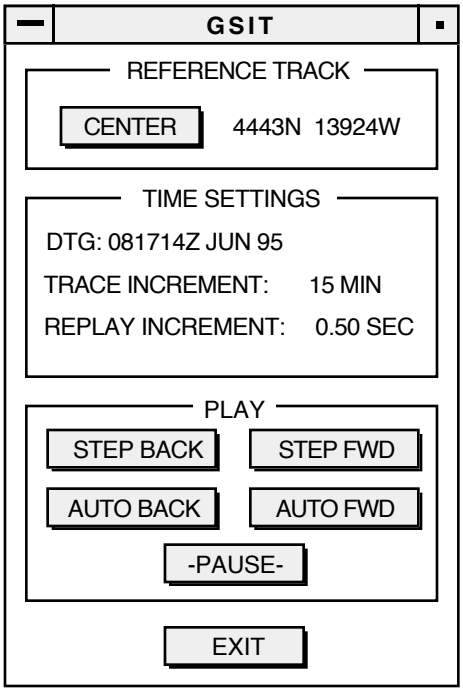

Figure 10.12-2 GSIT Window

When the GSIT window appears, the tactical display is modified:

- The view centers around the reference track.
- Only the selected tracks are visible.
- The title bar reads "GSIT MODE."

GSIT Window Buttons

CENTER—the display on a specified reference track.

1. Click CENTER to open the SELECT TRACK TO CENTER ON window.
2. Select a track and click OK to recenter the tactical display around the newly chosen track.

STEP BACK—in time by the increment listed in TRACE INCREMENT. The DTG shows the new time and the display shows the track positions at the new time.

STEP FWD—in time by the increment listed in TRACE INCREMENT. The DTG shows the new time and the display shows the track positions at the new time.

AUTO BACK—automatically move backward in time by the increment listed in TRACE INCREMENT. This action continues until either PAUSE or EXIT is clicked.

AUTO FWD—automatically move forward in time by the increment listed in TRACE INCREMENT. This action continues until either PAUSE or EXIT is clicked.

PAUSE—temporarily stop the AUTO BACK or AUTO FWD action. The action "pauses" the display at the specified time as shown in the TRACE INCREMENT field.

EXIT—leave the G-SIT option and return the current track information to the display. The tactical display title bar reads "Default Mode."

GSIT Window Pop-up Menu Options

Pop-up menu options (described in *GSIT Pop-up Menu*): BACKWARD, CENTER, EXIT, and FORWARD.

GSIT Window Fields

The REFERENCE TRACK box shows the current center point on the tactical display and gives the option of choosing a different track to center around. Use the TIME SETTINGS box to choose a time in the past to view the positions of the tracks that are currently displayed. The PLAY box is used to move backward or forward in time increments (as specified in the TIME SETTINGS box).

10.12.1 TIME SETTINGS

Fields in the TIME SETTINGS box are used to view the tactical display at specific times in the past.

DTG
The current time shown on the tactical display. Enter a new date-time group directly into this field and click RETURN to change the view to another time.

TRACE INCREMENT
The time increment used with the buttons in the PLAY box. Enter the specific amount of time (in minutes).

REPLAY INCREMENT
Set the amount of time (in seconds) before the tracks are replayed.

10.12.2 GSIT POP-UP MENU

In addition to the options discussed in *Summary of Common Operations* (EXIT), the GSIT pop-up menu includes the following:

CENTER

Performs the same as its counterpart in the G-SIT window.

FORWARD

Performs the same as the STEP FWD button.

BACKWARD

Performs the same as the STEP BACK button.

10.13 SITE CONTROLS

The SITE CONTROLS option turns on or off various sites in the system and assigns colors, based on different criteria. This option can also control the look of some site features.

Sites (such as cities, air fields, ports, oil fields, bridges, hospitals, and others) are entered into the system with the SITES option from the SUPPORT menu. When a site is defined, it is assigned:

- a symbol that appears when the site is turned on
- a priority number and a label (name)

To access this window: PLOT CONTROL menu **:** SITE CONTROLS option **:** SITE CONTROLS window (Figure 10.13-1).

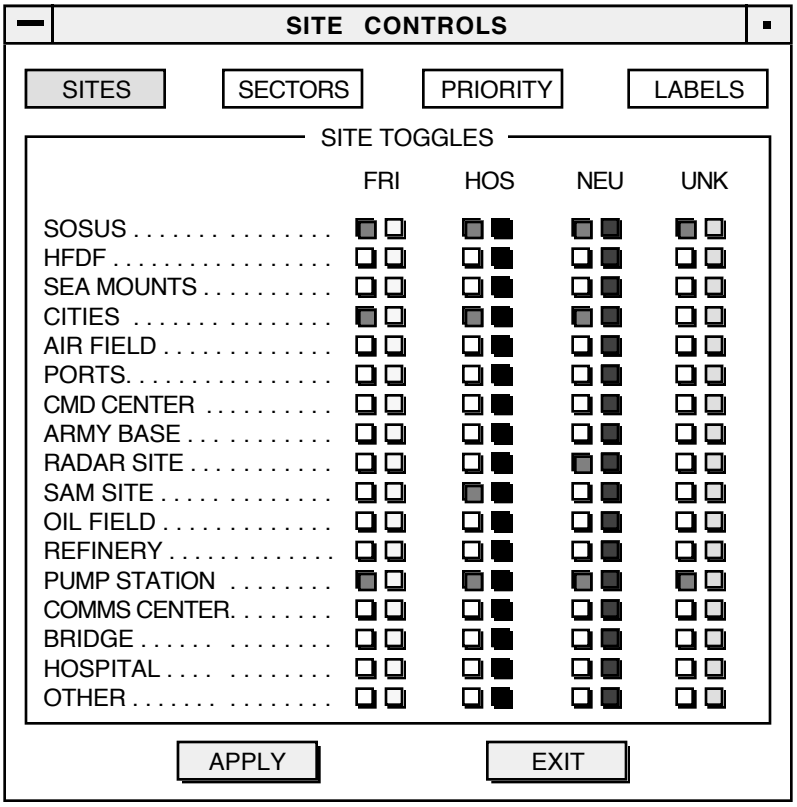

Figure 10.13-1 Site Controls Window

This window contains a group of diamond knobs to set site controls for SITES, SECTORS, PRIORITY, and LABELS, and a TOGGLES box whose title changes according to the diamond knob selected.

SITE CONTROLS Window Buttons

APPLY—accept changes made to the settings.

EXIT—discard changes made since the last APPLY and exit the option. Sites plotted on the tactical display remain visible.

10.13.1 SITES

For each site type:

1. Click checkboxes ON for the threat categories to be shown.
2. Click the row or column label to turn on or off all the checkboxes within the row or column.
3. To choose a color for a site type, click the appropriate color box to show the color list. Highlight a color from the list.

Some standard color settings are preset:

- light blue for friendly
- red for hostile
- green for neutral
- yellow for unknown

Use the STANDARD COLORS option from the pop-up menu to change the colors boxes to their standard colors.

10.13.2 SECTORS

The SECTORS diamond knob functions the same as the SITES diamond knob. Set the checkboxes for the threat categories and color for site types, as described in *SITES*.

10.13.3 PRIORITY

Click PRIORITY to open the PLOT PRIORITIES box in the SITE CONTROLS window (Figure 10.13-2).

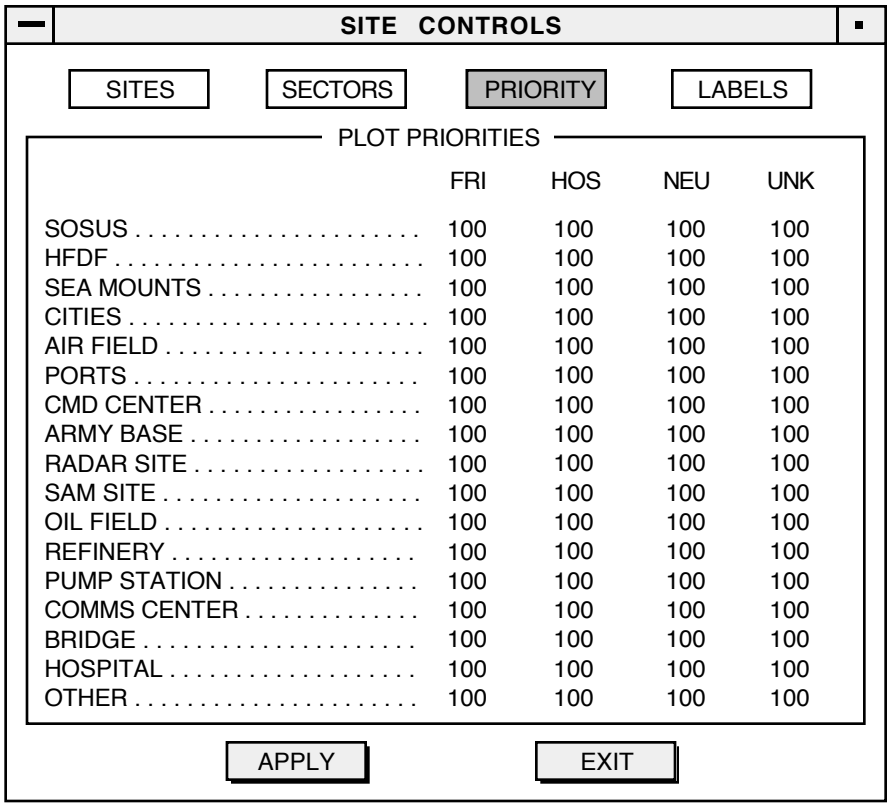

Figure 10.13-2 Site Controls Window (Priority Button Selected)

Use the PLOT PRIORITIES box to specify which site types are turned on or off—based on their priority level for friendly, hostile, neutral, or unknown sites.

- Priorities can be set from 001 to 100—001 is the highest.
- Sites with a priority equal to or higher than the entered priority are plotted on the tactical display.

For example, enter 005 for a site type priority. Any site of that type with a priority of 005 or higher (001-005) is plotted. Sites with a lower priority (006-100) are not plotted.

For each site type:

1. Select the site/threat category.
2. Type a new value.
3. Press RETURN, or select another site/threat category, to accept the value in the field.
4. Click APPLY to turn the sites on or off, based on the designated priorities.
5. Click EXIT to leave the option and discard the changes made since the last APPLY.

10.13.4 LABELS

Click LABELS to open the SITES LABEL CONTROLS box in the SITE CONTROLS window (Figure10.13-3).

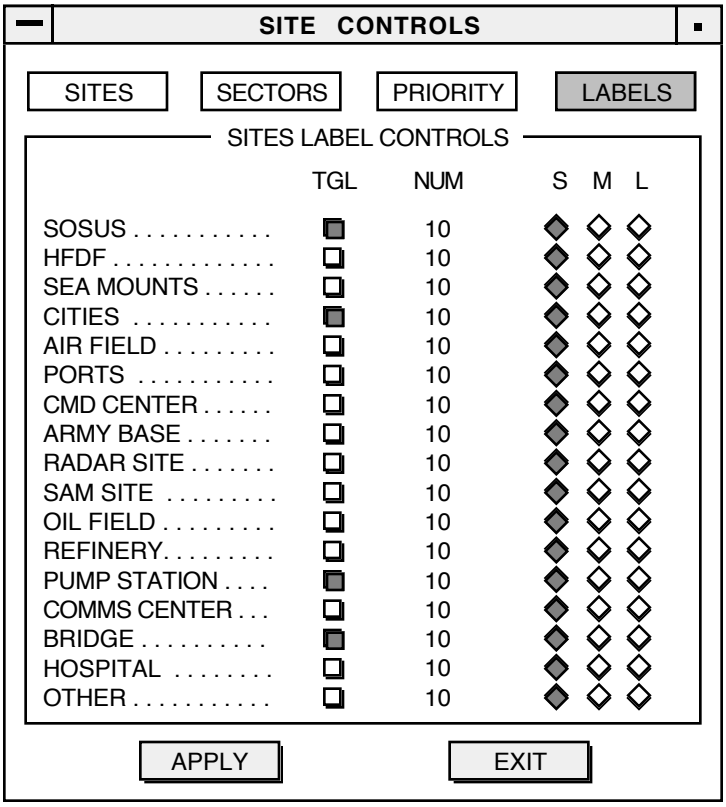

Figure 10.13-3 Site Controls Window (Labels Button Selected)

For each site type:

1. Click its checkbox in the TGL (toggle) column to plot a site label. Or, click the TGL column heading to turn all checkboxes on. (Clicking the column heading again toggles all checkboxes off).
2. In the NUM column, enter the number of characters to appear (maximum of 20).
3. Click the S (Small), M (Medium), or L (Large) diamond knob to set the size of the label.
4. Click APPLY to have the values take effect.
5. Click EXIT to leave the option and discard changes made since the last APPLY.

10.14 DECLUTTER

Use the DECLUTTER option to redraw the track labels and minimize the amount of label overlap.

The DECLUTTER option contains a cascading menu with three options:

- DYNAMIC DECLUTTER
- DECLUTTER FREEZE
- NO DECLUTTER

10.14.1 DYNAMIC DECLUTTER

Use the DYNAMIC DECLUTTER option to (1) declutter the tactical display, and (2) periodically declutter the tactical display as tracks are updated. The screen declutters every 2 minutes, or whenever there are 100 changes on the display—whichever comes first.

Choose the DYNAMIC DECLUTTER option and the following actions occur:

- In areas where track labels overlap, the labels are separated so they can be read.
- Solid lines appear, extending from the labels to their track symbols.
- In particularly cluttered areas of the display, some labels may be moved some distance from the track position, or may not appear at all.
- Track labels are moved or omitted in order of threat priority, lowest to highest—HOS, UAE, FRI, UAF, NEU, UEV, UNK, OTHER, NI. The lowest priority (NI) would be moved or omitted first.

Figure10.14-1 shows a tactical display before (left view) and after (right view) using the DYNAMIC DECLUTTER option.

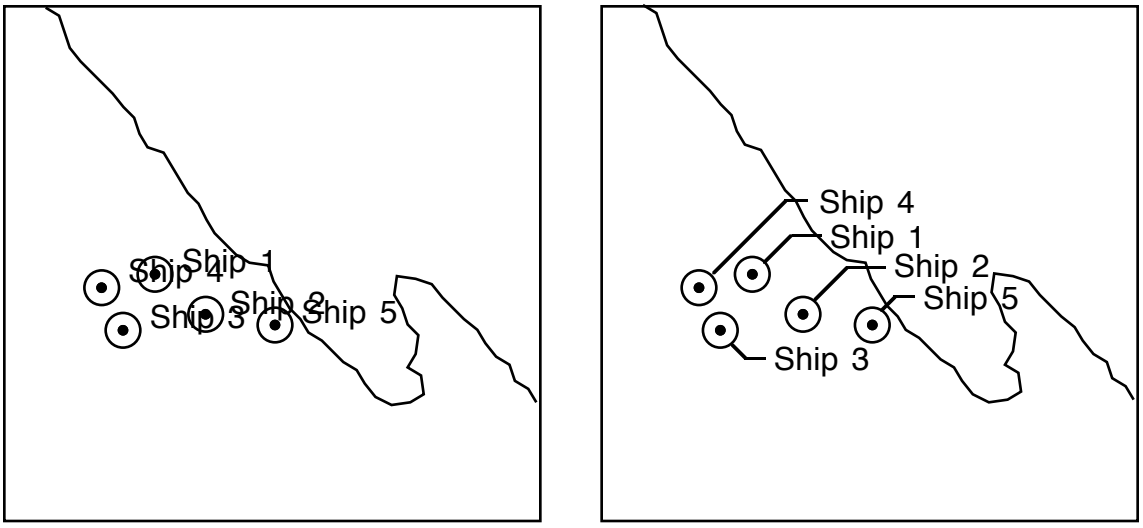

Figure 10.14-1 Before and After Dynamic Declutter

10.14.2 DECLUTTER FREEZE

Use the DECLUTTER FREEZE option to declutter the tactical display and freeze the tracks in their current positions with the following results:

- The appearance of the tactical display is the same as described in *Dynamic Declutter*.
- The main menu title bar reads "Freeze Mode."
- No new track updates take effect on the tactical display and no new tracks will appear.
- The display remains frozen until the DYNAMIC DECLUTTER or the NO DECLUTTER option is chosen from the DECLUTTER cascading menu.

10.14.3 NO DECLUTTER

Use the NO DECLUTTER option from the cascading menu to turn off the declutter process. The track labels are placed directly next to their tracks, regardless of whether they overlap other track labels.

Select NO DECLUTTER and track labels that have been moved by the DYNAMIC DECLUTTER or DECLUTTER FREEZE option are moved back to their original positions to the upper-right of their associated tracks.

Figure10.14-2 shows a tactical display before (left view) and after (right view) using the NO DECLUTTER option.

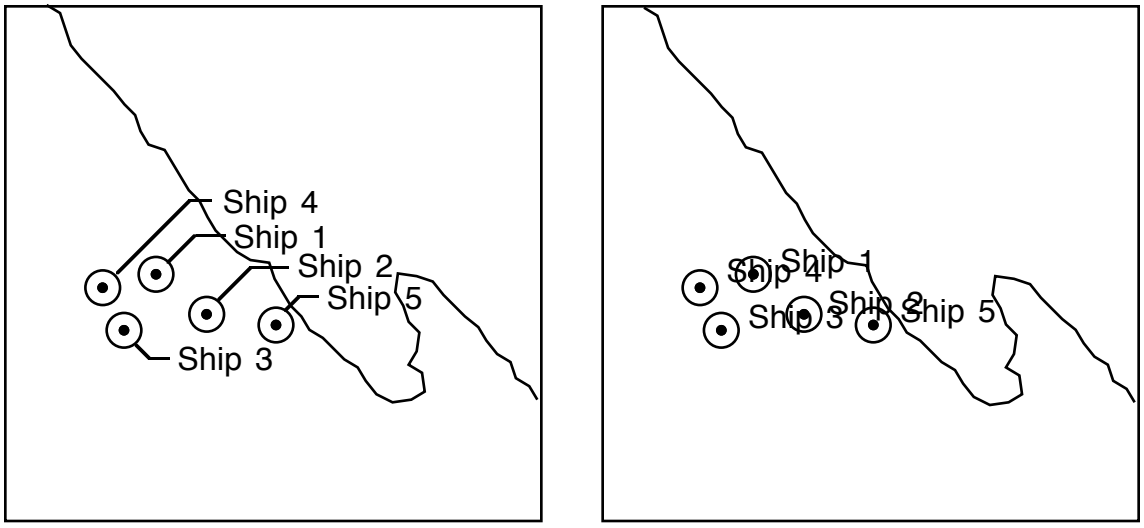

Figure 10.14-2 Before and After No Declutter

10.15 SET MASTER REF

Use the SET MASTER REF option to set or change the master reference track (usually OWNSHIP) for the system.

Many functions and JMCIS segments use the master reference track to perform calculations. Examples include Intercept, CPA, and Symbol Labels.

To access this window: PLOT CONTROL menu **:** SET MASTER REF option**:** SET MASTER REF window (Figure10.15-1).

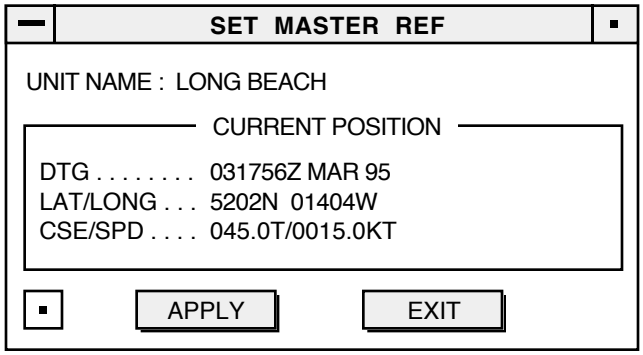

Figure 10.15-1 Set Master Ref Window

The SET MASTER REF window contains the following unit name and position information for the track designated as the master reference track.

UNIT NAME
Track name.

DTG
Date-time group for the last reported position of the track.

LAT/LONG
Last reported lat/long position for the track.

CSE/SPD
Last reported course and speed for the track.

To set or change the master reference track:

1. Click a track on the tactical display to use as the master reference.
2. The unit name and position information for the selected track appears in the SET MASTER REF window.
3. Click APPLY to save the track as the master reference track, or click EXIT to leave this option and discard changes made since the last APPLY.

10.16 TRACKCONTROL STORAGE

Use the TRACKCONTROL STORAGE option to save or discard track control settings between sessions. Use the TRACK CONTROL option, found on the track's pop-up menu, to set the controls for individual tracks.

The TRACKCONTROL STORAGE option contains a cascading menu with ALL TRACKS and NO TRACKS options.

10.16.1 ALL TRACKS

Select ALL TRACKS from the cascading menu to show a query window (Figure 10.16-1).

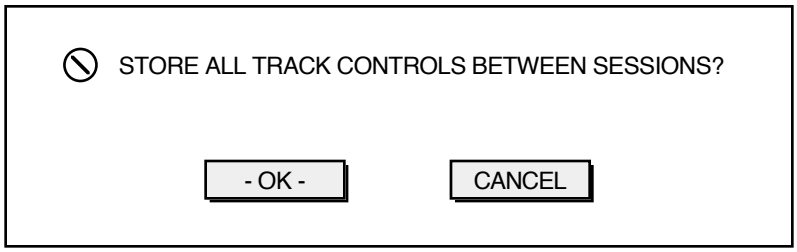

Figure 10.16-1 Store Track Controls Window

OK—save track control settings between JMCIS sessions; CANCEL—discard changes to the current setting.

10.16.2 NO TRACKS

Select the NO TRACKS option from the cascading menu to open the following query window (Figure 10.16-2).

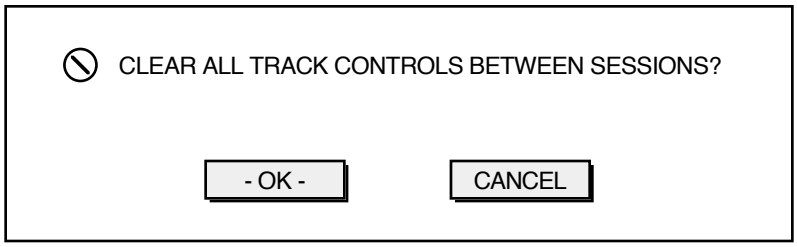

Figure 10.16-2 Clear Track Controls Window

OK—discard changes to the track control settings when the JMCIS session ends. Global settings entered from the options in the PLOT CONTROL menu take effect for all tracks when the system is restarted.

CANCEL—discard changes to the current setting.

Notes

Notes